



BUSINESS TECHNOLOGY LEADERSHIP

**A CIO'S GUIDE TO
VIRTUAL WORLDS**

Lessons from early
adopters in business

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CARE ABOUT I.T.?**

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The ART of the DEAL

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- » Trim maintenance contracts
- » Make consolidation work for you
- » Get vendors to give their very best!

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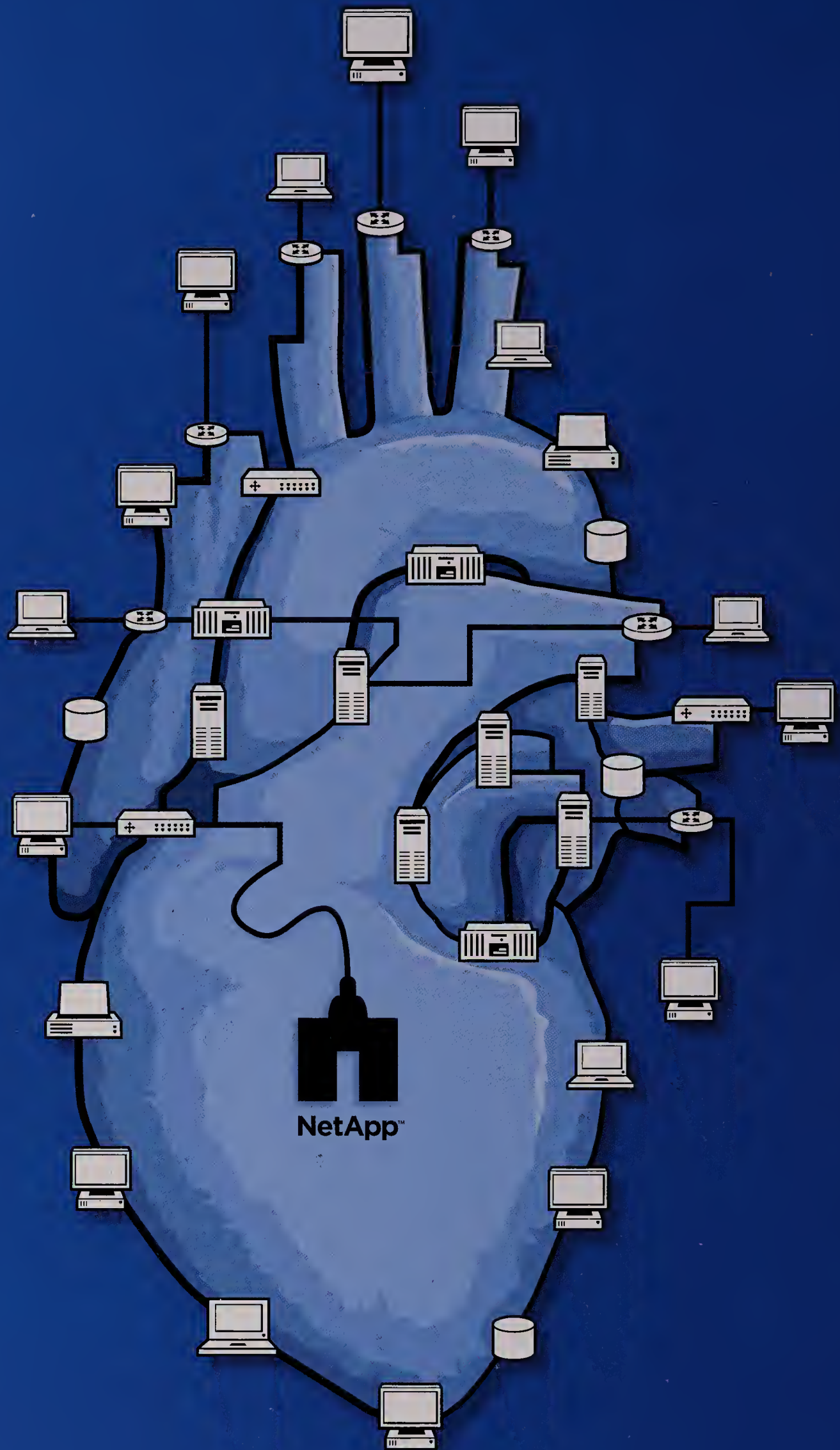
BY KIM S. NASH

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A small-company
CIO's call to get
some big-vendor
attention

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Johnson & Johnson CIO
LaVerne Council expects
partners to live up to the
same high standards
as company employees.



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[IT AND WALL STREET]

Did IT Help Wal-Mart's Quarterly Financial Results?

The retail giant turned a nice profit amid retail doom and gloom, but was IT the key? Recently implemented tools like HP's Neoview and Oracle's price-optimization app provided the business intelligence needed to improve customer service and decrease prices in expected Wal-Mart fashion. But few are willing to say IT increased the bottom line.

» www.cio.com/article/185901

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BANNING SOCIAL NETWORKS A LOSING BATTLE

IT executives from a variety of industries concede that social networks are here to stay, but they are still looking for ways to protect the company.

www.cio.com/article/189300

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David Price, formerly the EVP of the National Multiple Sclerosis Society, shares his techniques for sussing out the best hires.

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[MOBILE WORKHORSE]

BLACKBERRY ADDICTION?

Can you live without your BlackBerry? Writer Al Sacco tries to find out.

http://advice.cio.com/al_sacco/blackberry_addiction_and_you_the_detox_challenge

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- » **Gadgets:** Apple plans iPhone SDK release; users crave better apps

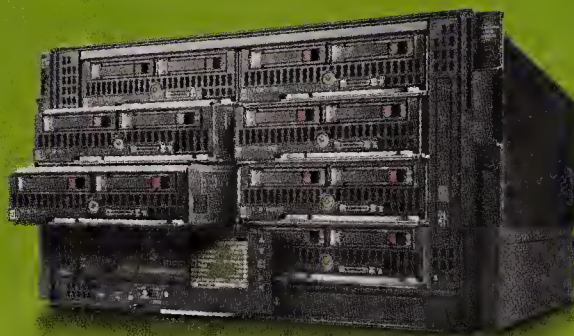


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The Fork in the Road

CIOs have a choice and they shouldn't wait to make it



I miss Peter Drucker. He was both visionary and pragmatist: a Wise Man for the dawn of the information age. Brilliant, with an amazing historic perspective, he was nevertheless approachable and down to earth. Business and business leaders owe him a debt of gratitude. His death at 95 two years ago was a huge loss.

I had the privilege of meeting Drucker a few times at *CIO* conferences, and we ran a number of articles about and with him, the last being a conversation between Drucker and Tom Davenport, a former *CIO* columnist, about 10 years ago. (See my blog at http://advice.cio.com/abbie_lundberg/the_cios_choice.)

The reason I'm thinking of him today is that a) I recently received another book about him, *A Class With Drucker*, which I'm looking forward to reading, and b) a few nights ago I attended a Boston SIM chapter dinner where one of his predictions from at least 15 years ago was presented as having finally arrived.

The SIM talk was given by Alex Cullen, vice president and research director at Forrester. What Drucker said in the early '90s was that there would be a bifurcation in the CIO role. What Forrester is saying today (to paraphrase Yogi Berra) is, "There's a fork in the road. Take it."

The paths of this fork lead either to a retreat to traditional IT, "getting stuck in the technology engine room," or to a focus on dynamic, differentiating technologies working as part of the business. I've written about this work of Forrester's before. This is not an either/or for the profession; there is, in fact, a place for IT execs down both branches; you just need to decide what it is that *you* really want to do.

One audience member argued that all this talk of business technology, agile business and competitive differentiation did not take into account the spaghetti mess of many organizations' current systems; that there's still a lot of work to be done before we can get to that higher-level state.

Cullen replied, and I agree, that business can't wait. What each CIO needs to decide for himself or herself is, do you want to be the person cleaning up that mess (a perfectly reasonable and legitimate choice—there's a lot of satisfaction in such work), or do you want to be the person leading the merging of business and technology from a strategic and differentiating position? Whichever path you choose, there's clearly work to be done restructuring your organization so both get the attention they deserve.

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Chief Enabling Officer

Everyone knows the CIO role is changing, but for better or worse?



I travel a lot in my job. In my travels, I get to meet some really interesting people. For instance, I had a fascinating dinner with a number of CIOs recently in San Francisco. The wine and food were tremendous and the conversation was even better. It's remarkable what happens when you get smart people together, ask a simple question and listen. The question, "Will the role of CIO be around for a while?" generated a fair amount of heat.

Now my livelihood, like yours, is predicated on the answer to this question, so you can understand why I shut up and tuned in. What seemed to become consensus is that the role of the CIO will be around for a long time, but it is going to change dramatically in regard to focus and scale.

Pat Lawicki, SVP and CIO of PG&E, articulated it best when she said that CIOs will be less about the information or the technology and more about the ability to enable the business. The CIO will still need to be an expert on the technology and how the information flows within the business, because, as Lawicki said, "You can't implement the business strategy without a sound technology philosophy, and you can certainly disable the business if you are unable to execute based on lack of technology capability."

However, beneath all that, the role of the CIO will be about a number of changing dynamics: enabling the business to grow versus just optimizing performance, saying yes instead of no, allowing open innovation rather than closed, traditional R&D practices, creating a culture of strategic growth and innovation and empowering the customer to make decisions that drive a heightened value proposition for both the customer and supplier.

Pat talked about PG&E's SmartMeter program, which allows customers to understand how they are consuming power and make decisions as to when they want to use it in real time. IT was the driving force behind this initiative, and while it wasn't new to collect massive amounts of data on user habits, what was new and innovative was pushing this information back to consumers, who could utilize it in a manner to change their own behavior. Pretty cool! Pretty empowering!

So when the debate starts to heat up again about the future role and title of the CIO, rather than focus on the future, maybe we should observe the evolution. That might just lead us to say it is CEO...Chief Enabling Officer. Has a nice ring to it.

Michael Friedenber, President and CEO
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trendlines

EDITED BY STEPHANIE GELSTON

NEW * HOT * UNEXPECTED

Demand for Executives *Slows*

CAREER Executive-level job seekers beware: Companies are putting the brakes on hiring—so much so that executive recruiters' perpetually sunny outlook for the market is waning, according to ExecuNet's Recruiter Confidence Index.

"Over the last three to four years, we've seen double-digit growth in executive hiring," says ExecuNet President Mark Anderson. "Last year, we saw 18 percent growth. This year, we're projecting executive hiring is going to be half that. That's a significant change. It's still growth, but it's much slower."

Less than 50 percent of executive recruiters surveyed in January by the career and business networking organization reported optimism about the executive hiring market. Asked if they thought the market will improve in the next six months, 47 percent were confident or very confident, down from 59 percent in December 2007. Simultaneously, there was a spike in pessimism; 14 percent of executive recruiters said they were not confident, up from 2 percent in January 2007. Respondents were asked to evaluate their level of confidence

Continued on Page 12



Microsoft Opens Its APIs to Mixed Reviews

OPEN SOURCE Microsoft's announcement of its strategy to enhance interoperability and openness drew cheers from the software industry, but don't assume the software giant did it out of charity. "This move heads off the competition from open source and open standards," says Nick Selby, director of research operations for The 451 Group.

Microsoft will open connections to high-volume products such as Vista and Server 2008, enhance data portability, better support industry standards and strengthen

communication with customers and the industry, including the open-source community. "This is the first recognition [by Microsoft] that an open approach makes business sense," says Selby. He thinks this "sea change" will have a major effect on the open standards and open-source movements.

Microsoft's move to open its APIs is good news for end users, IT and third-party vendors, agrees Matt Asay, VP of business development for Alfresco Software, an open-source alternative for enterprise content management. "This should

mean more seamless interoperability with third-party software solutions," he says, including Alfresco's.

However, Microsoft watcher Mary Jo Foley remains skeptical. "Until Microsoft shows a real change in its behaviors around interoperability, I see pledges like these as little more than the same-old rhetoric," she says in her blog.

Asay disagrees. "It's possible Microsoft will drag its feet. But given the publicity, Microsoft has made it harder to hide behind failed promises. The devil is in the details, but I'm optimistic." —Diann Daniel

Find Your Perfect Match

MENTORING Ever wanted a mentor but didn't know where to turn? Enter iMantri, a new social networking website designed to connect mentors with people who seek one.

iMantri provides what cofounder and CEO Satya Iluri calls competency-driven mentoring—help in areas such as time management, communication, leadership or project management. It also offers goal-driven mentoring, so users who aspire to become CIO, for example, can find a mentor.

Users search profiles of individuals registered with the site to find a mentor, or they can use a proprietary matching engine. The engine hinges on a competency assessment and employs a user's Myers-Briggs personality type to identify an effective mentor. A user who doesn't know his Myers-Briggs personality type is directed to an online test administrator, or he can select the appropriate personality type. The engine also factors in use preferences, such as location. Users can set the frequency of mentor interactions and keep tabs on tasks their mentors assign them.

Not all mentoring on the site is free. Professional coaches who register with the site may charge a fee.

Iluri says the goal is to offer the platform, which is based on XML, Ajax, RPC, Flash and Flex technologies, to enterprises for internal mentoring use. iMantri can connect with other corporate applications, such as an intranet, through API-based Web services.

—Meridith Levinson

Executive Hiring

Continued from Page 11

on a scale: very confident, confident, somewhat confident or not confident.

"That's a significant drop" says Anderson. "People are not moving to feeling 'somewhat confident.' They're moving to 'not confident.'"

Executive hiring is driven by two factors: turnover and corporate growth. Executive turnover was high last year and is expected to remain so into 2008, according to Liberum Research. Putting a damper on that growth is the economic slowdown. Companies aren't growing as quickly and that's reducing demand for new executives, says Anderson.

Chuck Pappalardo, managing director of Trilogy Search Non+Profit, thinks 2008 will be a tougher year for executive search firms. However, he doesn't believe it will be as bad as 2002 and 2003. "We're getting a slower start during the first couple of months of the year than we normally would," he says. "Companies are waiting to see what happens with the economy before starting searches."

The slowdown in executive hiring means that candidates will have to execute better on their searches, according to Anderson. Job seekers will have to rely more on networking to uncover opportunities since fewer jobs are available and therefore posted online, he says. They'll also have to better target their search efforts around growth industries, such as health care, and less on those that are contracting, such as banking, real estate and construction.

Says Anderson, "Look for where the opportunity is."

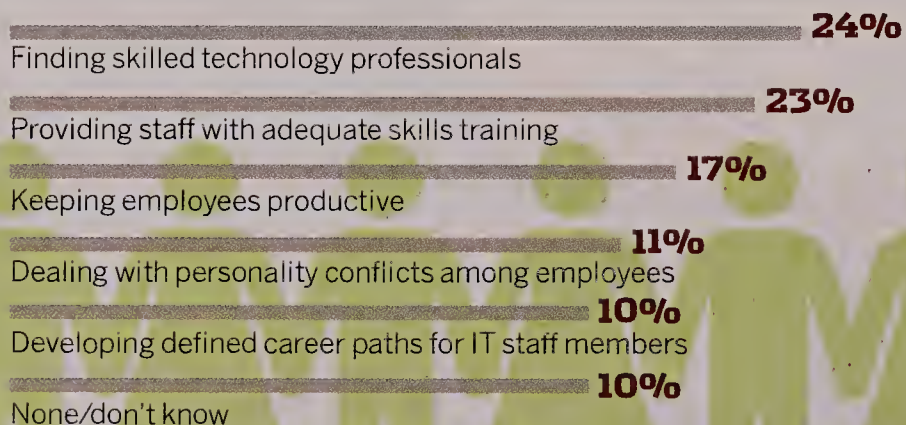
ExecuNet's monthly Recruiter Confidence Index survey is conducted online and circulated to executive recruiters via e-mail at both small and large retained and contingency search firms. A total of 238 search professionals responded to the survey in January 2008.

—Meridith Levinson

Staffing Hurdles

STAFFING A recession may loom but the war for talent rages on, according to a Robert Half Technology survey. CIOs say that landing experienced staff remains challenging. IT leaders at the largest firms (1,000+ employees) are having the greatest difficulty: **24 percent** named this their top staffing issue.

"Of the following staffing issues within the IT department, which do you consider to be your greatest challenge?"



SOURCE: Robert Half Technology



the

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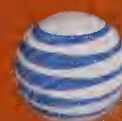


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IT Spending Eases Off

ECONOMY Companies are slowing down their technology spending as fears of a U.S. recession take hold in the nation's executive board rooms.

Twenty-three percent of respondents said their companies will reduce or halt second-quarter IT spending in 2008, according to a study by ChangeWave Research. The investment advice firm surveyed 2,013 people involved with IT spending from Feb. 11 to Feb. 15. Most worked for U.S. companies, with 7 percent coming from Canada, as well as a small number from other nations.

Only 15 percent said second-quarter spending would increase, a nine-point drop from last November. Just 10 percent reported that first-quarter spending was greater than planned, a fall of seven points. Twenty-seven percent said their companies spent less than planned in the first quarter, a rise of three points.

Meanwhile, 43 percent said their companies will "green light" second-quarter spending, meaning conditions are normal. But that represents a nine-point drop from the last study. The results are similar across companies of all sizes, according to the data.

"We're having a tough quarter right now," says ChangeWave Research Director Paul Carton. "Spending is down. That doesn't mean there aren't pockets where things are doing OK." Strong consumer spending could prop up the economy even as business tightens its belt, he says.

Respondents offered lukewarm forecasts for this year. Only 19 percent expected their IT budget to grow in the second half of 2008; 20 percent predicted it will drop. However, 51 percent believe it will remain the same.

—Chris Kanaracus



TIPS for Getting Out of a BlackBerry Jam

PDAS Margaret Genet knows BlackBerrys. Though officially dubbed "operations analyst," she's the first Aflac employee to hold the unofficial title of "technology concierge." Her job: Teach executives to be more efficient with mobile devices and applications. "I guarantee if you talk to [Genet] for 15 minutes, she will tell you 30 tricks you didn't know that will save you time," says Aflac CIO Gerald Shields.

Many of Genet's tips can be found deep inside various user manuals or BlackBerry websites, but who has time to dig? Here's a short list of her advice. (For more, read "Best BlackBerry Shortcuts: Aflac's Mobile Guru Shares Tips" at www.cio.com/article/174250.)

>>> Messaging

In the e-mail inbox, press the S key to search for a sender or a word within a subject line or mail folder regardless of whether the message was sent or received.

Within the inbox, access the complete list of messages sent by hitting the ALT key followed by the O key. To access the complete list of messages received, hit the ALT key followed by the I key.

>>> Phone Functions

Multitask during calls by hitting the BlackBerry menu key and selecting Home Screen. You'll have access to e-mail and other documents—though most devices don't allow simultaneous voice and data transfer, so Internet access is unavailable while on calls.

Find specific contacts from your home screen by pressing keys for first and last initials, with a space between them. If more than one contact has the same initials, scroll to the appropriate contact.

>>> Back to Basics

To put a device into Standby Mode so keys cannot be pressed while it's not in use, hold down the Mute key for a moment. Undo it by holding Mute for a few seconds.

If a BlackBerry malfunctions or freezes, remove the battery and SIM card—if it has one—and wait a few seconds before reinserting.

(Note: Some tricks may not work on all older BlackBerrys.)

—Al Sacco



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by the numbers

BY STEFF GELSTON & C.G. LYNCH

Consumer Tech: CIOs Remain Divided over Adoption and Support

CONSUMER TECH To support, or not to support? CIOs are asking themselves that question when it comes to consumer or Web 2.0 technologies in the workplace. So far, opinions remain split around this issue, according to a CIO magazine poll of 311 IT decision makers regarding their views on consumer technologies in the enterprise.

The survey found that two-thirds of respondents offer some type of consumer technology as corporate applications to their employees, mostly IM (50 percent), wikis (30 percent) or blogs (23 percent). Some 29 percent are monitoring the business case for mainstreaming such technologies.

However, 54 percent of respondents believe consumer applications are "inappropriate for corporate use," while more than a third say they take the draconian measure of shutting down any unsupported technology as soon as they detect it.

To understand which consumer technologies made IT executives cringe the most, we asked them: Which consumer technologies pose the greatest threat to your organization? A clear consensus emerged on the number-one threat: portable storage devices.

In fact, 43 percent of respondents believe external hard drives, iPods and USB devices pose the greatest security threat to their organizations. However, other technologies also worry survey respondents. Nearly one in five (18 percent) view consumer e-mail as the greatest consumer tech security threat followed by instant messaging (11 percent), social networking sites (9 percent) and smart phones/PDAs (7 percent).

Best Practices

1 Resist the urge to shut it down. Blocking sites such as Facebook or consumer e-mail like Gmail doesn't stop workers from accessing those applications over their iPhone while at work. Talk to users to find out why they're using a consumer technology. Maybe they're using Facebook to connect with customers.

2 Reevaluate usage policies. Dust off that user agreement you've had sitting in your filing cabinet since 1997 and update it to include things like iPhones, Facebook and Skype.

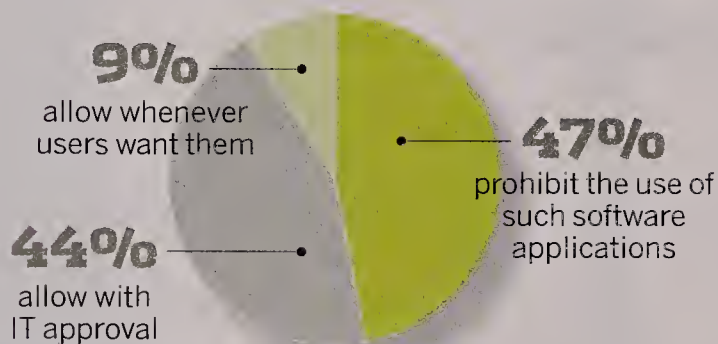
3 Trust your users. In the end, employees are measured by their productivity. If they use IM to chat with friends, odds are you'll pick up on it.

TRENDLINES

A Tipping Point for Consumer Software?

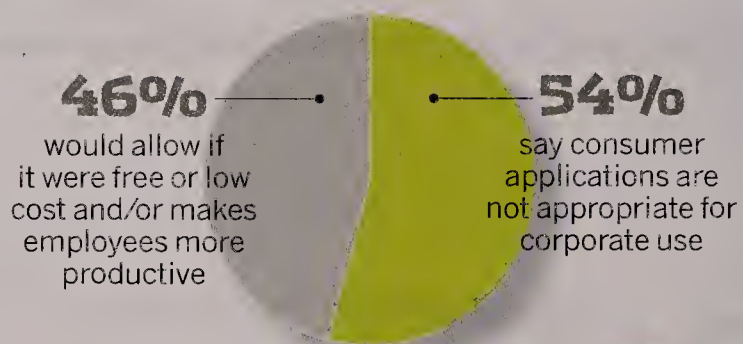
DEGREES OF FREEDOM

More than half of respondents let users find and use their own software applications.

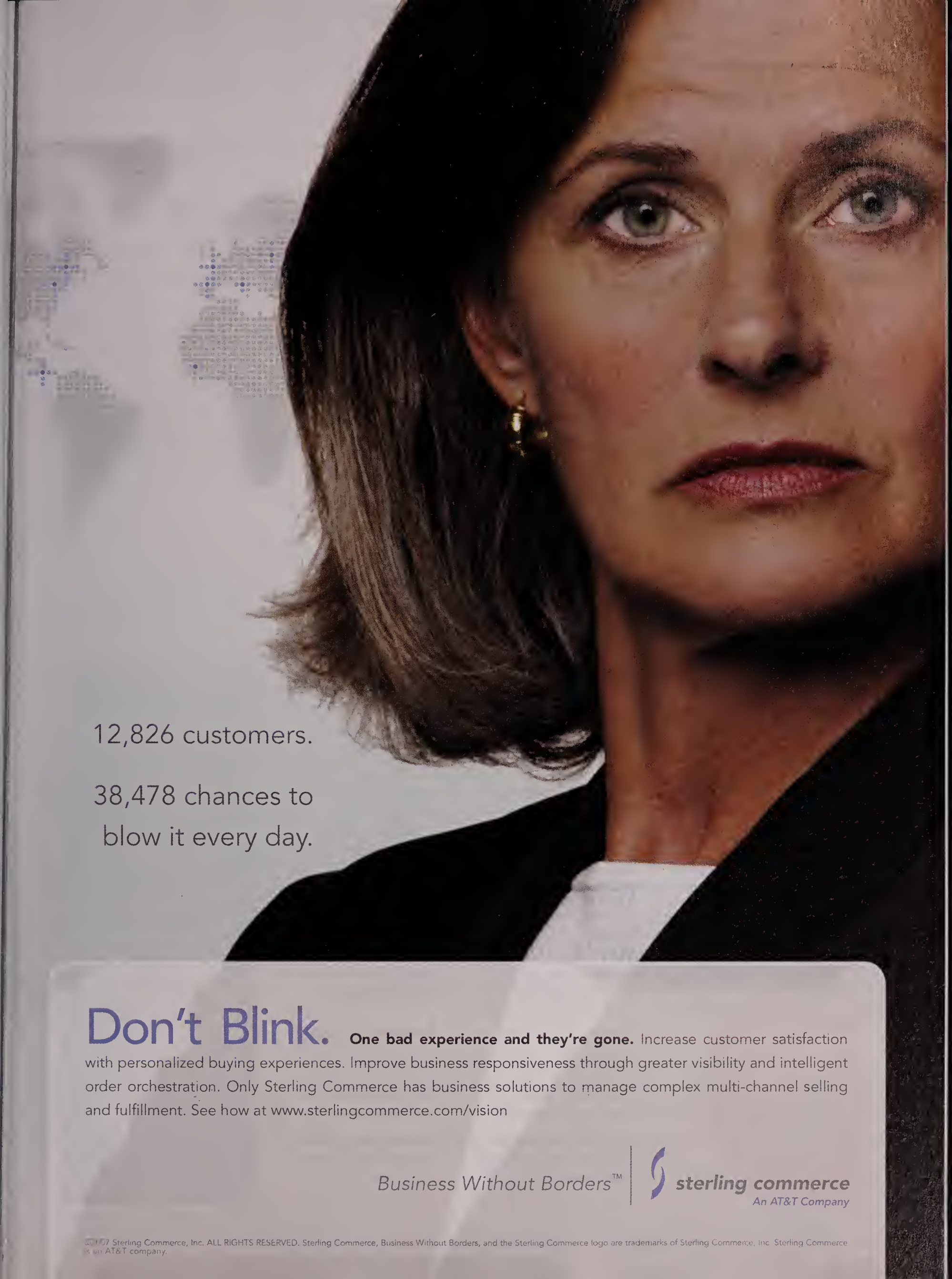


SPLIT DECISION

Opinions are mixed about consumer applications like Google or Zoho at the office.



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BY **FRED O'CONNOR**

RFID Systems Engineer

job description: An RFID (radio frequency identification) engineer handles developing and implementing a company's system to track goods and information via wireless chips. Industries where they are needed range from health care to pharmaceuticals, says Andy Zaleta, partner and coleader of the technology practice in the Americas for executive search firm Battalia Winston International. A 2007 survey by CompTIA found that more than two-thirds of organizations surveyed believe there is an insufficient pool of RFID talent from which to hire.

offer the opportunity to network for possible candidates as well as the ability to research hires.

elimination

round: Zaleta says a candidate needs to see larger applications for RFID. "You want someone who can say, 'Yeah we're doing this now, but here is what we can do down the road.'" Hiring a third party to test IT skills will also determine whether a candidate has the right background.

why you need

one: RFID is a great way of tracking things, says Zaleta. Applications for tracking technology are limitless, and more uses for RFID will be developed as chip prices decrease and standards are introduced, according to the Institute of Electrical and Electronics Engineers. However, the technology's newness means that a company's level of RFID use will determine the depth of the role and the type of

hire needed. Firms with a more established program will need employees who can help maintain the system. Companies with limited or no RFID experience may require someone to build all aspects of a system.

what to look for:

Candidates need to have an outlook beyond a strict engineering mindset, according to Zaleta. Companies are looking for conceptual, strategic thinkers who can see future uses for RFID and help them leverage the technology. Strong communication skills and the ability to work with others are key criteria in this job. "Teamwork is important. They need to interface with people across different parts of an organization," says Ellen Valentine, chief marketing officer for

CIO Partners, a recruitment firm.

desired skills:

An electrical engineering degree from a major technical institution (think MIT; Carnegie Mellon; University of California, Berkeley; or Georgia Tech). Industry experience using RFID is a plus. In a retail environment, ERP, CRM, distribution and supply-chain management experience strengthen candidates. An understanding of security doesn't hurt, since RFID tags may hold sensitive data.

how to find one:

RFID engineers are usually buried in an organization, which makes finding one difficult. Try looking for leads in industry journals and at conferences, which

growing your

own: The qualifications for an internal candidate are similar to those for hiring an outsider, says Zaleta. He recommends starting with engineers in your own IT department. What you need is a person who understands information technology but who also possesses an operations mindset. The advantage of hiring someone from the inside is that such candidates should be able to improve upon how the company currently deploys RFID due to their knowledge of the business, according to Zaleta.

TRENDLINES

**salary
range**

**\$110,000 to
\$120,000**

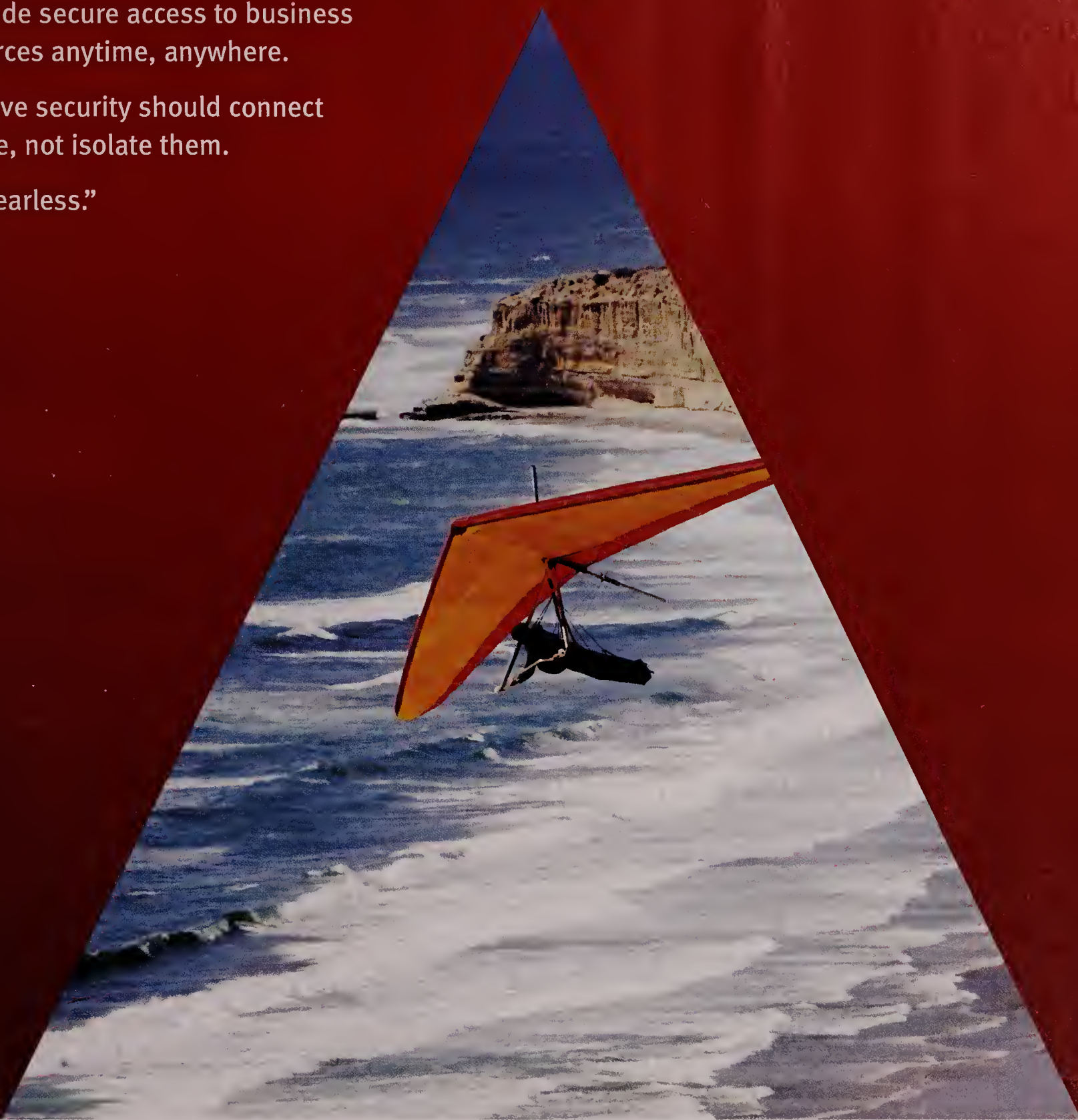
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Most companies waste 1 percent to 3 percent of revenue on imaging. You can change that, while you improve business processes and cut energy consumption.

Fit to Print

BY MERIDITH LEVINSON

DOCUMENT HANDLING | Two years ago, in a bid to reduce costs and enable new technologies, the University of Pittsburgh Medical Center (UPMC) merged its print shop, which handled bound materials like flip charts and insurance booklets, with its technology print center, which produced paychecks, W-2 forms and clinical handbooks. In the process, UPMC began looking at the amount of money that the \$7 billion health-care provider spent on printing, and the number of printers, fax machines, scanners and copiers deployed across its 20 facilities in western Pennsylvania. The figures were staggering, says Jeff Szymanski, UPMC's director of IT. The organization was spending approximately \$10 million on imaging devices, supplies and maintenance every year.

It had 13,000 printers, copiers, fax machines and scanners for 43,000 employees. There was one device for every 2.5 employees, 10,000 print queues, and a tangle of IP addresses for the networked devices.

"When you look at the number of devices [in your enterprise], it's overwhelming and embarrassing," says Szymanski.

Most companies don't pay much attention to the amount they shell out for printing, not to mention the cost to procure, supply and maintain their fleet of imaging devices. "It tends to get overlooked because it's not sexy or up front," says Don Dixon, Gartner's

research director for printing markets.

What's more, printing and imaging usually isn't controlled centrally in organizations. IT departments will be in charge of buying and installing printers because they run on the corporate network, while supply chain organizations or facilities departments will control purchasing supplies for those printers

manual workflows and, in some cases, improve compliance with certain federal regulations through security features. By taking control of imaging, CIOs can also reduce their company's impact on the environment. Those benefits should help you make a business case for upgrading your company's imaging devices and for convincing recalcitrant

those offices and the total cost of ownership for each device. GES was spending more than \$1 million per year on printing and imaging. "The cost was outrageous," says Esfahani.

If GES put an MFD at each location, HP told the company, it could anticipate savings of 28 percent per year by paying a base monthly price for leasing

"When you look at the number of devices [in your enterprise], it's overwhelming and embarrassing."

—Jeff Szymanski, director of IT, University of Pittsburgh Medical Center

as well as other imaging devices. Consequently, enterprises waste anywhere from 1 percent to 3 percent of their revenue on imaging, according to Gartner's estimates. And in some paper-intensive industries like insurance and legal, that number is even higher, says Dixon.

At UPMC, Szymanski began a printing and imaging assessment in October 2007 with the help of Xerox. During the 12- to 18-month project, he expects to reduce his 13,000 devices to 3,000 multifunction devices (MFDs). During the next seven years, he expects to save 30 percent to 35 percent in printing costs. Additionally, the revamp will help UPMC move from approximately 2,700 dedicated phone lines to 1,300—saving about \$11,000 per month—and reduce its 12,000 IP addresses for networked devices to 3,000.

In this time of increased focus on the health of the U.S. economy, CIOs would benefit from taking control of printing and document management within their organizations and investigating opportunities to consolidate and upgrade their fleets to MFDs that combine printing, copying, scanning and faxing functionalities. Not only can that save their companies money—Gartner estimates as much as 30 percent annually—but the MFDs and document management systems help automate and streamline business processes such as traditionally

users to give up their pet printers and change their attitudes toward hard copy, which ranks among the biggest challenges associated with these projects.

Assess the Printscape

Sy Esfahani, executive vice president and CIO of GES, the events company that produces the annual Consumer Electronics Show in Las Vegas, says identifying potential cost-savings from consolidating and upgrading imaging devices is the first and most important step of the process. "Take your time with that," says Esfahani, who began analyzing his company's printing and imaging costs in 2005. "This is a major undertaking." If it wasn't going to save his company money, he was not going to replace every device.

But how to figure out those cost savings? Esfahani worked with one of his longtime printer vendors, HP, to inventory the total number of devices throughout GES's Las Vegas headquarters and 20 regional offices. The company had 754 printers, copiers and fax machines for 1500 employees. Most were more than five years old; some had hung around for more than a decade.

HP then took a closer look at the devices at three locations that GES chose as representative of all of the company's offices. HP determined how many people were using each device at

devices as well as per page per device, which includes the cost of maintenance and ink and toner cartridges, instead of purchasing devices, ink and toner on an as needed basis, says Esfahani.

With the estimated cost savings in hand, HP went to each of GES's offices and drew up floor layouts pinpointing where each device was located. The blueprints allowed GES to determine which devices could be dumped and where to put the new MFDs, taking into consideration the distance between MFD and employee and the number of steps required to get to the MFD. GES also took requirements from its offices for color devices. (Most printer and copier manufacturers like HP, Xerox, Canon and Ricoh will perform this kind of assessment for their customers.)

GES wound up reducing its fleet by 64 percent. It now has just 268 MFDs and is saving close to 32 percent in printing costs every year.

Calm Users' Nerves

Esfahani says his number-one concern was angering employees who didn't want the personal printers and faxes that they had earned by rank taken away.

"As a symbolic gesture, the CEO and executive team were the first to give up their printers to set an example for the rest of the organization," he says. That example also demonstrated the execu-



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tive team's commitment to the new print management paradigm inside the company, which everyone was encouraged to follow.

UPMC took the same approach: Szymanski, his technology group and UPMC's executive team gave up their individual printers.

Szymanski says he went to lengths to communicate the reasons why UPMC was consolidating devices and the benefits that users would experience from the move, using e-mails, meetings and UPMC's internal company newsletter. He also made sure that printers were close to the clinical and lab workers who needed them handy.

If your users don't care about how much money the new approach to print management is going to save the company (after all, it's not like savings are going to show up in their paychecks), you might want to appeal to their inner tree-hugger. Szymanski says even though going green wasn't UPMC's initial objective, all the employees are proud of the fact that the move to fewer MFDs reduces the amount of energy wasted. "We're pleased that this project decreases our costs, improves efficiency and reduces waste and power consumption," he says.

Some users are harder to convince than others when it's time to relinquish old printing habits. Mike Clayback, director of IT at Sealing Devices, a privately held manufacturer of o-rings, gaskets, EMI shielding and adhesives, had to qualify the system he implemented in 2007 to ensure it operated as expected. Instead of passing paper invoices, shop work orders and purchase orders from sales to manufacturing to accounts payable, Sealing Devices now uses Perceptive Software's ImageNow document management system to route and store electronic versions of those documents.

Employees in the quality department and in the rest of the company wanted to know that all of the documents being

"The CEO and executive team were the first to give up their printers to set an example for the rest of the organization."

—Sy Esfahani, executive vice president and CIO of GES

scanned into the new system were properly indexed and that the system wouldn't lose their data. Clayback audited the system to show users that it was in fact working properly and to assure them that they didn't need to save hard copies of the documents they were scanning for backup, which was precisely why ImageNow was implemented.

He recommends auditing the software soon after the implementation to prove to users that the system is working and installing a shredder right next to the scanner to wean staff off paper and curb their pack-rat instincts.

Establish New Processes

The cost savings associated with fewer machines and supplies is just the start of a printing and imaging revamp. To reap even more benefits on an ongoing basis, companies need to take advantage of the full capacity of their MFDs and document management systems to automate and streamline business processes, says Gartner's Dixon.

For example, GES employees now scan their paper time cards into the MFDs, which automatically route the electronic files to a centralized electronic mailbox. Previously, they FedExed the cards to headquarters. The new, automated process has cut GES's shipping costs.

GES also uses the MFDs in tandem

with a document management system to electronically route contracts with vendors around the office.

Another efficiency improvement comes from the MFD's ability to automatically alert HP when ink or toner gets low. HP then sends replacements to GES. Similarly, if the devices need to be serviced, they automatically alert HP. "That's a huge operational efficiency for us. It fully automates the whole [servicing] process," says Esfahani.

At Sealing Devices, Clayback says, the company has reduced its cycle times for document handling, with improvements ranging from minutes to hours, depending on the location of paper files. Its accounts payable department can process 20 percent more invoices per day now than previously because Sealing Devices established new workflows at the same time that it implemented ImageNow.

Also, because the document management system serves as a one-stop shop for invoices, purchase orders, and manufacturing and shipping documents, when customers or suppliers call Sealing Devices with questions or payment discrepancies, the company can address those issues on the first call. "The efficiency improvements come from the new software and the new workflows, but we couldn't implement the new workflows without the imaging system," he says.

A final benefit of replacing old machines with new MFDs: It gets IT out of another "plumbing" business, Esfahani says. **CIO**

Small Steps, Big Returns

Besides printing, what else have you ignored lately? See **20 THINGS YOU CAN DO IN 20 MINUTES TO BE MORE SUCCESSFUL AT WORK** at www.cio.com/article/185900.

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Meridith Levinson is a senior editor for CIO. She can be reached at mlevinson@cio.com.



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The Hard Sell

The big vendors beat down the doors of large companies to get business, but a small-company CIO gets the brush-off. If small and mid-market businesses have money to spend, why don't the big vendors want it?

BY MICHAEL GASKIN

In the movie **"The Empire Strikes Back,"** you may remember, the great sage Yoda tells Luke Skywalker, "Size matters not...." But according to IT leaders who met last fall (at a conference sponsored by *CIO's* publisher), size matters when you're attempting to engage large information technology consultancies. These vendors don't seem to want to do business with smaller organizations, even though we have money to spend.

One IT leader who came from a large shop before landing his current role said it was difficult to get phone calls returned from the once "cozy" vendor, whose sales reps were eager to talk to him when he commanded a larger budget. Another observed that the talent his vendor provided was "green." Finally, a few expressed disbelief at vendors' pricing; it appeared these vendors were geared only for large organizations with large IT budgets.

Vendor Help Wanted

I have experienced some of the same frustrations. For two years I have been employed as the director of information services at the nonprofit Sequoia Community Health Centers in Fresno, Calif. Sequoia's primary purpose is to provide outpatient care to the most disadvantaged citizens in the Fresno area. In

2006 alone, Sequoia healthcare professionals saw more than 37,000 patients.

Because we rely on grants and government funding, it's more difficult for us to fund strategic IT projects than it is for for-profit organizations; however, that doesn't mean IT gets a pass on providing outstanding technology or strategic value.

Sequoia's IT team has nine members. With such a small shop I have to spend a great deal of my time maintaining operational excellence. However, my role must move from operational to one that is more strategic. During my first year at Sequoia I concentrated on improving the processes that affect operational excellence. With these processes largely working, I must now spend my time on providing a technological vision for Sequoia. Because I am a member of the Executive Leadership Team (the pri-



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mary operational management body), my CEO also expects not only technical vision but business vision as well.

As an example of this push to address strategic concerns, Sequoia's five-year strategic plan mandates that a disaster recovery plan be completed by December 2008. As Sequoia deploys new technologies such as electronic health records, our network infrastructure must provide the necessary reliability and performance. When a patient's health record is electronic, we must restore operations faster.

Furthermore, given that important medical information is available only electronically, we needed a plan for how IT should respond when a disaster occurs.

As you can imagine, creating a disaster recovery plan requires an enormous amount of time—and, as I noted above, I've been focused on operational excellence, not long-term strategic planning. To provide me with more time, my CEO authorized me to hire an IT manager early this year to maintain operational excellence. However, even if I had a fully trained IT manager in place, I don't have the expertise to create a plan that can withstand the scrutiny of auditors and Sequoia's board.

A consultancy could help me develop the details of the disaster recovery plan, and so last year I attempted to engage IBM. From a previous job at a large hospital where I worked with IBM, I had found them to be an excellent partner. But the cost was out of Sequoia's reach.

I was surprised by IBM's lack of interest. I had a budget of \$25,000 and wanted to give it to IBM. At \$225 per hour, \$25,000 can get Sequoia 111 hours of consultancy. That won't buy me implementation, but I believe it's enough time to develop a good plan. Once the plan is completed, our internal staff can work on the recommendations outlined in the plan. Yet I realized in talking with my IBM representative that Sequoia (because of our size and budget) wasn't the right fit for IBM.

Herein lies the problem. Just because Sequoia is a \$25 million organization, that doesn't exempt us from some of the same challenges that larger organizations endure. Just like the large hospital that I worked at previously, Sequoia struggles with network performance and availability. But the large hospital has a few advantages that I don't have: a larger IT department and the ability to engage external vendors for expertise.

What Would Yoda Do?

Not only are the IBMs of the world leaving money on the table, they're also risking future sales. The IT leaders at small organizations will, in many cases, be employed by larger organizations someday. Why alienate them? Vendors could engage IT leaders in small organizations now and build brand loyalty.

The IT leaders at small organizations will, in many cases, be employed by larger organizations someday. Why alienate them? Vendors could engage IT leaders in small organizations now and build brand loyalty.

(For more about getting the most from vendors, see "The Art of the New Deal," Page 38.)

How could they make such a business model work? Let's imagine (with apologies to George Lucas) what Yoda might do if he were running a large consultancy. For one thing, I'm sure he would have a dedicated group of Jedi Knights sworn to serve those in technological need. These knights would not be Padawan Learners (the Jedi in training), but rather full-fledged Jedi Knights with at least a few years of experience behind them. As the IT leader of the small organization moves to larger organizations (or expands, as Sequoia is doing), Yoda would have another group of Jedi who could handle more complicated problems. The handoff would be seamless, quite possibly keeping the same Jedi Master account manager in charge.

Yoda would also have a menu of consulting options like that for smaller organizations. These menu items, such as disaster recovery, could be geared in price and scope to fit organizations of different sizes. By having a menu of consultancy options, IT leaders of smaller organizations could plan and budget for these expenditures more easily.

Finally, Yoda would also establish a council of customers similar in size and scope to Sequoia. The council would serve as a sounding board for IBM to determine what suite of services would be relevant to small organizations, and advise IBM on its prices for smaller customers.

May the Vendors Be With Me

Certainly the struggles of a multinational corporation are far more intense than my own, but I can learn from them and apply their tried-and-true management principles to Sequoia. That's why I spend time sharing information with other CIOs. But to help me implement those best practices, I'd like access to the same expertise that my colleagues at larger companies have.

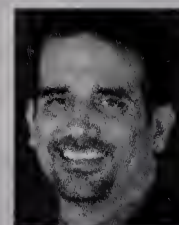
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Michael Gaskin is director of information services at Sequoia Community Health Centers in Fresno, Calif., and is a member of the CIO Executive Council. He can be reached at michaelg@sequoiacommunity.org. To comment, go to www.cio.com/article/162450.





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How to Tell Your Boss There's No Free Lunch

You've been asked to do a project that's not in your IT budget. Time to muster your diplomatic skills and help your boss decide which other projects to give up instead.

Your budget is decided and it'll be a stretch to deliver all that's expected of you with such limited resources. Then comes the unfunded mandate—that project that you don't have money or staff for, but can't say no to.

"Sure, we understand it's not in your budget. But we need it," your boss tells you. You smile, grit your teeth. Oh, in that case, I guess all my staff will work

for free to get it done, you think. Not!

"You're an exec. I know you can find a way to do it," he continues. Now there's a great pep talk.

"It's not like we have a choice," you hear next. "This comes from the top." Ah, well then, no problem, since it's mandated by someone up top who can create hours and money out of thin air!

Whether a business unit went off and bought a system that needs IT support, or the company decides to expand operations into a new region (with the consequent need for a network and e-mail), unfunded mandates are common and they all add up to the same thing. People, whether your boss or your clients, expect something for nothing and blame you when you can't deliver. And the best thing you can do is to get them to decide which other projects to delay.

How Not to Respond

You can't say no. No matter how unreasonable it seems, this unfunded mandate really is important to the executives at the top. Perhaps it's a real mandate coming from government regulations or law. Maybe it's imperative because of the business landscape. In any case, it's not negotiable.

A good leader knows that it's not right to simply pass an unreasonable mandate down to subordinates with the same insensitivity as that which was imposed from above. The ramifications of that poor choice are obvious. Staff individually set their own priorities, choosing which other commitments they'll postpone in order to fulfill the mandate. As a result, other projects fail randomly. Maybe everything comes in late. Maybe staff cut corners on quality. Or maybe they completely fail to deliver on some promises.

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Meanwhile, the CIO loses respect among her staff and builds a lot of animosity because she hasn't protected them from unreasonable demands. Setting one's staff up for failure is not going to get the job done and—if this needs to be said—it's not nice.

Another response, hardly better, is to instruct staff to sacrifice sustenance activities like training and process innovation projects. One may think giving up training or process improvement is necessary only to satisfy a temporary, short-term exigency. But the truth is, this is a slippery slope. Do it once, and you'll have reinforced the belief that your organization can absorb more work without more resources. You'll be expected to do it again and again. As a result, there will never be enough time for anything but urgent projects.

Of course, this is myopic. Any IT organization that's willing to do without training, innovation, process improvements, client relationship building and other "keep-the-business-viable"

activities is only postponing its inevitable demise. Over time, IT becomes difficult to do business with, inefficient and out of date.

An unfunded mandate can't force IT to do something for free. That's impossible. Nothing is free.

Another possibility that's not much better is for the CIO to decide which client projects to postpone or cancel. A CIO may be honest about his or her decision, explaining to clients that the unfunded mandate has bumped their priority on the organization's resources. However, although open communication protects the integrity of the organization, it doesn't do much for its customer focus or client relationships. It's like saying to a client, "As your CIO, I have decided that the project you requested isn't all that important to the enterprise."

Worse, if decisions are made behind closed doors and clients don't know what's going on, IT gains a reputation for being untrustworthy.

So what else can a CIO do? The answer is found in the business-within-a-business paradigm.

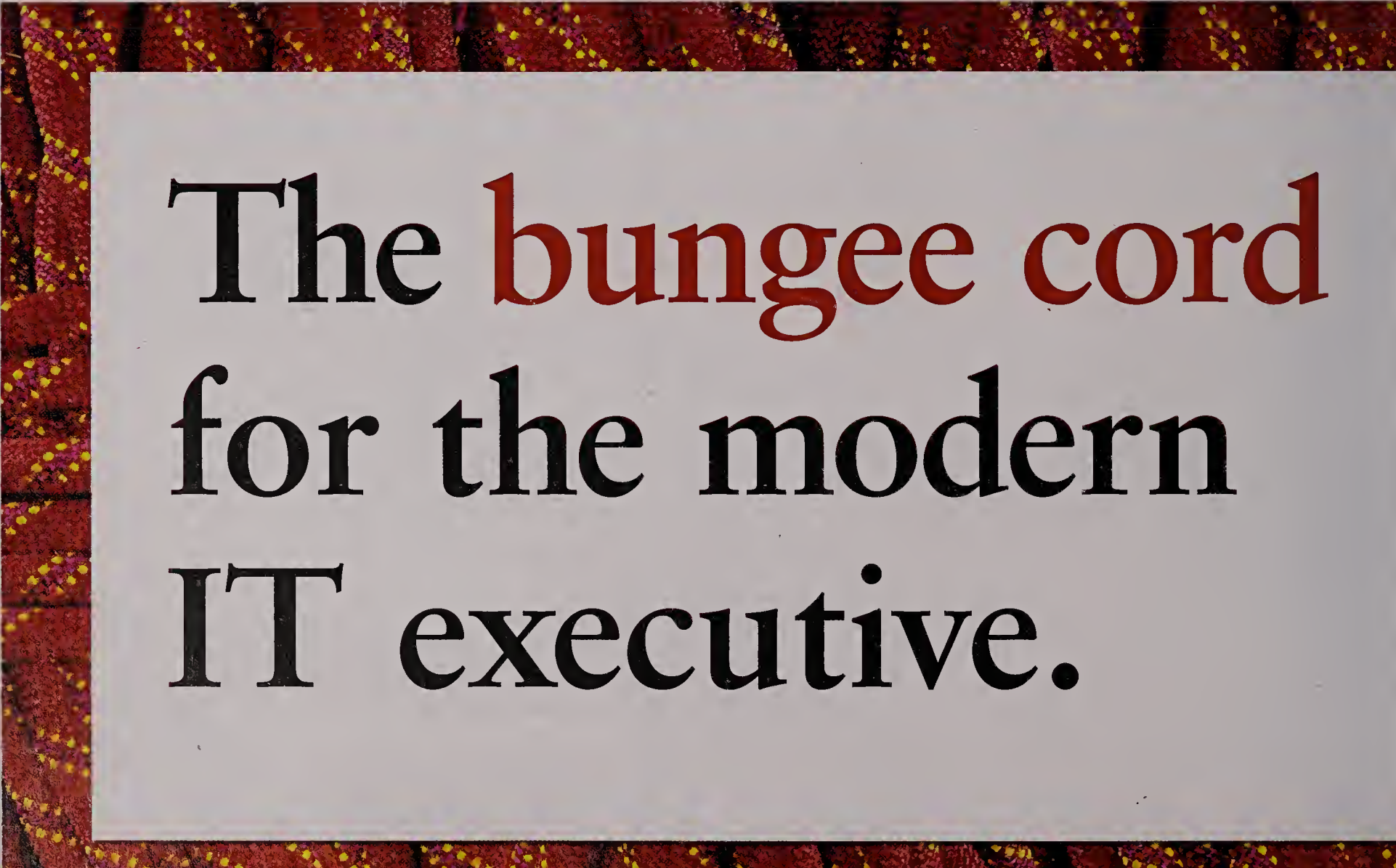
The Solution: Act Like a Business

If you think of IT as is a business within a business, the IT budget doesn't really belong to the CIO. Instead, it's a prepaid

Beneath the Buzz

To read more columns by N. DEAN MEYER, go to www.cio.com/author/41464.

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account—money put on deposit with the IT organization in order to buy products and services throughout the fiscal year.

I am not talking about chargebacks. I'm simply describing a governance process that matches expectations to available resources (read an in-depth discussion of this concept in my column on allocations, at www.cio.com/article/168653).

As a business, IT has many expenses such as compensation and vendor services. IT earns revenue to cover those expenses by delivering the products and services that clients choose to buy. Clients use their prepaid account to pay for those purchases. And the cost of their purchases cannot exceed the resources they have in that account. Typically, clients make purchase decisions through a committee with a name like "IT Steering Committee" using a process such as portfolio management to decide what to buy with that prepaid account.

An unfunded mandate can't force IT to do something for free. That's impossible. Nothing is free.

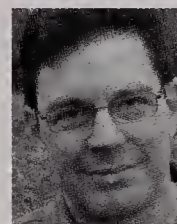
Rather, an unfunded mandate forces clients to use their prepaid accounts to buy something they didn't intend to

The only reasonable way a CIO can respond to an unfunded mandate is to present the situation to the clients... and let them either find more funding or decide what IT products and services they'll do without.

buy—something they don't necessarily want. As a result, less remains in the prepaid account. It's up to clients to reset priorities and decide what they won't buy to pay for the unfunded mandate.

Remember this: Unfunded mandates force the hand of the clients, not the IT organization. The only reasonable way a CIO can respond to an unfunded mandate is to present the situation to the clients who control the prepaid account, and let them either find more funding or decide what IT products and services they'll do without. **CIO**

N. Dean Meyer writes the Beneath the Buzz column on CIO.com. Contact him at dean@ndma.com. To comment on this article, go to www.cio.com/article/183900.



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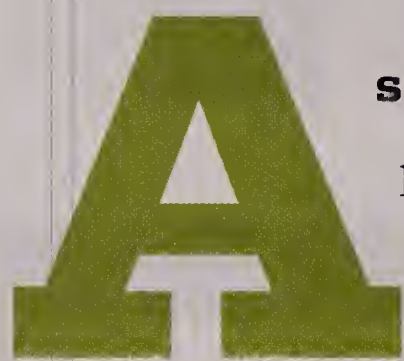
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Career Advice That Works

CIOs from FedEx, Campbell's Soup, Carlson and other top companies share the counsel that helped them get ahead



As CIO, you have doled out your share of advice to the people you mentor. But at this stage in your career, you probably feel confident enough in your own counsel that you rarely seek advice from others. Regardless of the title we bear, however, we are all on a career path and could all benefit from the perspective of those who have traveled a similar course.

To that end, I asked several successful CIOs for a piece of career advice that they received along the way that has served them well. Their experiences can help as you consider your own role—or provide new material for you when you are coaching others.

Get uncomfortable. I was a young technology manager and had a job that I absolutely loved. Everyone was my friend and the work really appealed to me. I was on a management development plan and was sponsored to interview for a job in a large-scale systems development area of a different division of the holding company. This would be a lateral move for me but doing something completely different with a major project that was struggling. When they made me an offer, I turned it down.

Well, my VP called me up to the 37th floor and

told me how disappointed he was with me. He told me that he had been working hard to advance my career and that I was being a chicken by sticking with my comfort zone and not stretching my skill set. He put his foot in the middle of my back and kicked me out the door. Turns out, he had intercepted my rejection, so I had the chance to reverse my decision and take the job. I learned a completely different skill set and was promoted twice within the next 18 months. That job really launched my career, and the opportunities it gave me are why I get to sit in this amazing job today.

—Robert Carter, CIO, FedEx

Carpe diem. A colleague once told me that the key to success is not to worry too much about long-term career plans, but just to spot and seize great oppor-

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tunities. It's not about picking a career path. It's about being brave enough to go for opportunities that do not necessarily fit into the career path you set for yourself. In my mid-30s, I was managing director of trust operations at Bankers

Trust. The IT organization was implementing a \$50 million trust accounting system. The systems leader became ill and had to leave. So, after a major battle over getting funding for the project, we had no one to lead it. With no real technology experience, I went to the vice chairman of the bank and said, "I can do this." He was skeptical, but I told him that I could figure it out, and he gave me the project. I wound up leaving my operations management career path for senior IT leadership roles at Bankers Trust and Prudential Insurance, and then to my first CIO role at Nabisco.

—Doreen Wright, CIO, Campbell's Soup

Fall on your sword. Very early in my career, a mentor advised me that it is far better for your career in the long term to admit responsibility for failure than minimize it or defer accountability.

In the late '80s, I was championing a massive company-wide project and determined at a pretty advanced stage that it was unlikely to be successful. Instead of trying to save it, I made the decision to throw in the towel and tell my boss, the CIO, that the project was a failure. When my boss decided to promote me later, the integrity I showed on that project weighed heavily in his decision.

—Peter Solvik, former CIO of Cisco Systems and now managing director at VC firm Sigma Partners

Go with your gut. The best career advice was given to me by a peer when I was at GE and it had to do with starting up a CIO role in a different company. Whenever you begin a new role, you do a lot of listening, receive a ton of input

and learn as many facts as you can about the current situation. But after you've received all of that data and opinion, you need to follow your own instincts.

When I took the CIO role at Medtronic, I was its first-ever CIO. As a result, I got a lot of input about what my first priority should be from the people who hired me. I took all of that input in, but I knew that the very first area to focus on was the team and organization because it was not set up the way it needed to be. Had I acted on the priorities of others, I might not have been as successful.

—Jeff Balagna, CIO, Carlson Companies

The key to success is not to worry about long-term career plans, but just to spot and seize great opportunities.

What interests your boss should fascinate you. My mentor, Edith Kelly-Green, was VP of Sourcing at FedEx when she said this to me many years ago. When Edith arrived at FedEx, she learned that the big deals happened on the golf course. This was new territory for her, an African-American woman. Rather than risk being pushed to the sidelines, she took golf lessons and learned the game. When I moved to the Dallas/Fort Worth area, I had little knowledge of hockey, and the Stars had just won the pennant. I knew that if I wanted to build relationships in the company, I had to follow Edith's lead and get smart enough about local sports that I could participate in that dialogue.

—Jeff Campbell, CIO, BNSF Railway

Get dirty. Early in my career, I was a manager of engineering support for AIS, a division of Raytheon. The division was having trouble getting planes out the door and the IT department did not have the respect of the business. Systems were not working and needed major upgrades, people were not held accountable for their work. My boss said to me, "I'm going to have to fix this problem. Will you help?" I was not certain that I was up to the task, but I dove in. He promoted me to director and over the next 19 months, we restructured the organization, got pay increases for the staff, made large systems modifications and turned the organization around.

—Doug Debrecht, CIO, Chemtura

Love it or leave it. Years ago, an author named Beth Milwid was working on a book of career advice for women, and I had an opportunity to interview with her. Her advice to me was that we spend too much time at work not to love what we do and if you don't, move on. I took this to heart and have applied it throughout my career. At one point, I went to a new company as global technology infrastructure leader in order to round out my résumé and prepare for a CIO role. But when I got there, I assessed the IT environment and wound up outsourcing much of the infrastructure. I felt like I'd learned what I had wanted to learn and didn't see my career growing by staying where I was. So, when a great opportunity at a new company came along, I took it.

—Jody Davids, CIO, Cardinal Health **CIO**

Martha Heller is managing director of the IT leadership practice at ZRG, an executive recruiting firm in Boston. Reach her at mheller@zrgroup.com.

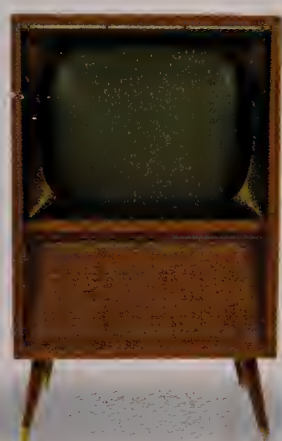


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The Art

What You Can Learn from the **Masters of Vendor Management**

Of the New Deal

BY KIM S. NASH

THE LAST TIME WE SWEATED through an economy as harsh as today's environment—back around 2002—the technology market looked very different.

CIOs, fresh off a multiyear technology buying spree fueled by the dot-com boom, were trying to justify their spending in an uncertain post-9/11 economy. Vendors such as PeopleSoft and Business Objects were selling strong against Oracle, Microsoft, SAP and other big rivals. Influential financial companies, such as Merrill Lynch and E-Trade, had just begun committing to Linux. Sure, the economy stunk. But CIOs could negotiate better deals thanks to a competitive vendor landscape.

Today, CIOs have mostly mastered the case for ROI but are under new pressure to come up with ways IT can generate revenue for their companies. Open-source Linux is now an established standard; less-tried computing models such as virtualization are the current risky bets. Meanwhile, Microsoft, Oracle and SAP have snapped up dozens of other technology companies, shrinking CIO choice in the enterprise vendor market. And the economy stinks. Again.

But you're wrong if you think a potential recession, combined with big-time consolidation in the software market, has stripped CIOs of all bargaining power. Now is the right time to push technology vendors for a better deal than the one you have, even if you've recently signed contracts, say CIOs and their heavy-hitter negotiators.

But the way you go about it will make all the difference.

Learn from CIOs who take no guff as they command technology budgets in the hundreds of millions and veteran negotiators who specialize in crafting IT contracts. With advice ranging from how to make industry consolidation work for you, to why to hang back from forming a so-called partnership with a tech supplier, these diplomats relish doing deals in adverse circumstances.

Reader ROI

- :: Why now is the right time to push vendors for a better deal
- :: How to make industry consolidation work for you
- :: Ways to deal with the issue of high maintenance fees



LaVerne Council, CIO of Johnson & Johnson, expects vendors to live up to the company's credo around respect, fair profit, and managing ethically in order to earn partner status with the health-care products giant.

You can, too. If you manage vendor relationships with strength and subtlety. (Read about small companies' vendor challenges in "The Hard Sell," Page 26.)

"Everyone understands we're facing recession. The vendor doesn't want to lose you," says Jeff Muscarella, managing partner at NPI Financial, a spend management consulting firm in Atlanta. Know that, he advises, and use it.

Don't Fear Consolidation

Between them, Microsoft, Oracle and SAP have bought at least 76 software companies since 2005. PeopleSoft? Gone. Siebel? Gone. Business Objects and Pilot Software? Gone and gone. Fewer vendor choices, goes the conventional wisdom, means the CIO loses leverage.

Not so, says Stephen Guth, director of the vendor management office for the National Rural Electric Cooperative Association (NRECA). Guth, who is in charge of dealing with IT vendors, helps buy software for the association's 900 electricity co-ops and trains them to negotiate with vendors. (Read "How Do You Measure Value for the Money" at <http://www.cio.com/article/185351>.) All told, the annual software spend is about \$100 million.

"Consolidation isn't bad. I've never experienced that," Guth says. For example, he remembers being outraged at first by Hyperion's "enablement fee"—a levy assessed whenever a customer wanted to upgrade to System 9 of its financial analysis software.

Hyperion reasoned it had so drastically rewritten parts of System 9, and added new business intelligence features, that it was like a new product, not a typical upgrade. Therefore, the maintenance fees customers had been paying didn't cover a switch, according to Hyperion's statements at the time.

Guth didn't see it that way. The enablement fee was, in his opinion, "a sign of desperation to drive revenue" at a time—2006 and 2007—when Hyperion's profit margins were slipping.

Like Guth, many Hyperion customers complained, prompting IT research consultancy Gartner to warn last year that for the company to continue as a leader in business intelligence, it "will need to waive, or substantially reduce, the fee."

Some customers balked and negotiated better deals for them-

With Vendors, Reprogram Your Reaction to Recession

RECESSION HOVERS and the usual corporate response is a rush to cut spending. That reflex makes sense, right? Money is tight, be tighter with money.

But such Pavlovian management of IT spending could bring trouble by limiting the competitive moves a company can make at a time when agility counts, says Howard Rubin, CEO of consultancy Rubin Systems, a Gartner senior adviser and CISR associate.

Too many senior executives see technology almost schizophrenically, Rubin says. "They know it is a key to competitive advantage, they know it has value, but they view it as a cost."

The implication being that when recession hits, IT and finance managers start to pull back on technology projects to save money. This is "shooting yourself in the foot," Rubin says, because investing in IT should save more money than the IT project costs, or should generate revenue.

Plus, he adds, you can bet that while you're hesitating on IT projects, some of your competitors are not cutting, indeed are spending more on, IT—which only opens up the gap between you and them even more. "Spend into the skid," Rubin advises.

Ed Hansen, a lawyer with Morgan, Lewis & Bockius who specializes in IT contracting, offers another way to free up money: Don't wrestle with your technology vendors for discounts. Instead aim to get more product or service for the money you do pay.

For example, telecommunications deals are commonly viewed as tactical and sending bits through a pipe is a commodity transaction, Hansen says. Really, though, telecom is becoming a strategic technology, he says. "Look at all the content being delivered over the Internet, look at your wide-area network to other countries, your voice-over-IP systems."

Rather than trying to cut your provider to the bone on pricing, work in some extra guarantees on uptime or the amount of traffic that moves on a daily basis, Hansen advises.

"If you think you're going to cut 10 percent of the IT budget, that's nice. But the world advances," he says. "Get more for that same money."

—K.S.N.

selves. The University of California at Berkeley, for example, paid an enablement fee of \$168,000 to move to System 9—35 percent of Hyperion's initial \$480,000 gauntlet, according to the college's fiscal 2007-2008 IT budget proposal.

Guth, however, wanted no part of the enablement fee. Meanwhile, Oracle had begun circling Hyperion, sparking acquisition rumors. Guth knew NRECA wasn't going to install System 9 immediately, so he decided to wait and see what might happen. He's a lawyer with four certificates in contract management, purchasing and procurement and 15 years' negotiation experience. He's steely.

In April 2007, Oracle bought Hyperion for \$3.3 billion and Guth took up talks with his old Hyperion sales representative,



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United Technologies CIO **John Doucette** has successfully pushed back with vendors and negotiated them down on the cost of software maintenance fees.



rep was replaced by one from Oracle, Guth argued against the fee and, ultimately, he paid none.

"For some reason, when it comes to software vendors, people get squirrely, thinking, 'If a vendor has hooks into me, then I'm not going to be able to negotiate good deals,'" he says.

Oracle has since dropped the fee altogether.

THE LESSON ▶▶▶ Even big vendors that acquire lots of other companies can't ask for the moon every time, says NPI's Frank Muscarella. He's sat across from Oracle, SAP, Microsoft and other powerhouses, representing companies such as Boeing, Lands' End, Hilton and Tupperware. A recession hurts tech suppliers as much as anyone else. "Nobody is not feeling the pressure," he says. "Vendors make claims

Beware the Word "Partner"

An easy patois floats in the conditioned air inside many companies. You've no doubt spoken it.

"How was your weekend?"

"Send me a note on that."

"It's all good."

It's more light chat than meaningful conversation. To this, now add any phrase containing the word "partner," used as either noun or verb.

There's not a technology sales rep breathing who doesn't want to be the CIO's partner. And certainly, a CIO should expect and coax key vendors to work side by side to reach common goals. But people so wantonly toss the P-word around, it can mean nothing.

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"When it comes to software vendors, people get squirrely, thinking, 'If a vendor has hooks into me, then I'm not going to be able to negotiate good deals.'"

—STEPHEN GUTH, DIRECTOR OF VENDOR MANAGEMENT, NATIONAL RURAL ELECTRIC COOPERATIVE ASSOCIATION

care products, has for 65 years operated according to a credo that outlines J&J's responsibilities to customers, employees, local community and stockholders. The credo, which is on the company's website in 32 languages, talks about respecting individuals' dignity, managing ethically and giving suppliers the chance to make a fair profit while J&J does as well.

It's a how-to guide for becoming a Johnson & Johnson partner, actually, though some slick vendors fail to see it.

Employees at all levels live the credo, according to LaVerne Council, Johnson & Johnson's CIO. The company has received piles of awards for diversity, leadership, opportunities for working mothers and equality in the workplace.

That makes for a nice place to work, Council says. But vendors sometimes misinterpret the conviviality they encounter. Some assume too quickly that they are partners—or they think they can pretend to be.

"J&J is a very collegial company," she says, "and people read that as weakness, frankly."

Ouch. A bigger mistake one cannot make with Council. Before joining Johnson & Johnson as CIO in 2006, she was global vice president of IT at Dell and before that a partner at Capgemini. She was also a consultant at Mercer Management and Accenture and holds an MBA in operations management. She knows the game and wastes little time calling someone out (see "Worried About a Recession? How to Hold the Line on Your IT Budget," at www.cio.com/article/175850).

For example, if a vendor's developer or consultant working on-site perhaps doesn't live up to the credo, Council talks to that person's manager. "To give them the opportunity to understand the disconnect and give them a chance to step up," she says.

What that manager does then affects the life of the engagement. Council declines to name names, but says that she recently faced a situation in which a vendor continued to tell two divisions within Johnson & Johnson different stories about its product and pricing. Council cited the credo to that person and said she expects her suppliers to act the same way.

"You end up very disappointed in certain folks' actions and behaviors. But it doesn't mean we will tolerate it," she says. Things didn't improve. She doesn't do business with that vendor anymore.

The performance of another vendor last year also fell short, but the way that company handled it won Council's favor. The vendor missed deadlines for a key project. Then a leader on the vendor's team made an appointment with Council to talk about the problem. "It wasn't a hostile conversation," she recalls. "He acknowledged the mess and it wasn't about trying to save face. It was about trying to make it right."

They worked out a plan. The vendor didn't run away or ask for more money to bring more people on to fix the project, she says. Come next review time, the vendor had met the mark. That's the behavior Council expects before calling anyone "partner."

"We're all really nice people," she says. "But we want really nice people who deliver."

THE LESSON >>> Partnerships are built on the quality of work delivered, not on personalities and hale handshakes. Define your expectations. And don't use the term *partner* until you see the vendor produce work that meets the goals—your goals.

Fight Back on Maintenance

Even when the economy froths with prosperity, the one negotiating point guaranteed to provoke both parties is the price of software maintenance. It takes special skill to argue straight-faced that the maintenance fees vendors devise are scientific. The wiggle back and forth on those fees can get contentious, says John Doucette, who has spent the last seven years as CIO of United Technologies, a \$60 billion conglomerate that includes Pratt & Whitney, Sikorsky, Otis Elevator, Carrier, UT Fire and Security, and Hamilton-Sundstrand.

Lately, Oracle has asked Doucette for annual maintenance fees equal to 22 percent of license costs, while SAP wants 17 percent to 20 percent. Both are too much, Doucette says. Microsoft calls its product care plans different names, such as "software assurance," and asks for about one-third the cost of the software, Doucette says. But it all looks like maintenance to him—and expensive maintenance at that. "Thirty-three percent!" he rails. "Repaying for your software every three years? It's frustrating."

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By waiting, the National Rural Electric Cooperative Association's **Stephen Guth** was able to ultimately resist paying Hyperion's enablement fee.

So far, Doucette has pushed back and negotiated his vendors down.

What aggravates him, he says, is that he knows vendors are developing big chunks of their product lines offshore, where labor is cheaper than in the U.S.

United Technologies itself hires offshore outsourcers for some programming. "I know I'm five times more productive than several years ago, so [the vendors] have to be, too," says Doucette. "But my price from Oracle and these other companies has not gone down at all."

Average software maintenance costs amount to 26 percent of the total cost of ownership for the software, which IT managers say is too high, according to a recent Forrester Research survey.

A "fair" maintenance cost would fall between 10 percent and 12 percent of the total cost of ownership, according to the poll of 215 business and applications professionals.

"We get pressure from our CEO and CFO every day about productivity," Doucette says. "We don't think we're getting any price productivity from software providers."

THE LESSON >>> Object to high maintenance fees as many times as it takes. Then find a way around those fees if necessary. One way to avoid getting locked into high maintenance fees is to hire third-party service providers to do the job, says Forrester analyst Ray Wang.



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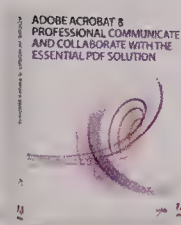
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There's not a **technology sales rep** breathing who doesn't want to be **the CIO's partner**. And a CIO should **expect and coax** key vendors to work side by side to reach common goals. But people so want only **toss the P-word around**, it can mean nothing.

Stir the Pot

UniGroup, a \$2.3 billion transportation and relocation services company, keeps a stable of key vendors: IBM, Verizon, Microsoft and Cisco, among others. But CIO Randy Poppell regularly puts out requests-for-proposals seeking bids from those vendors' competitors. He's been able to shave costs this way and gain more services for the same money, he says. (For more on this subject, read "Why You Need More Than One Software Vendor" at www.cio.com/article/171155.) IBM, for example, recently lost some of UniGroup's IT business; Poppell gave it to another smaller vendor, but he declined to provide details.

Pitting one vendor against another in an effort to keep your incumbent lively and responsive is a classic vendor management tactic. Classic for a reason: It works.

But there are more creative ways to harness angst.

A few months ago, Mitchell Habib, executive vice president of global business services at The Nielsen Co., asked his vendors—including those with whom he doesn't do much business—a question: If you were competing with me, how would you set up your ideal IT infrastructure?

In his challenge, he gave the vendors 30 days and 30 of his own people to work on the project. Habib is now considering some of the ideas dreamed up by Oracle, Accenture, Sun and others as he picks his way through a major reconstruction of how Nielsen manages technology. Habib—who has been a CIO at Citigroup, General Electric and Ryder—was hired a year ago to plan and oversee the IT overhaul at the \$2.5 billion information and media company. At Nielsen, he's introducing new software platforms and last October signed a 10-year, \$1.2 billion outsourcing deal with Tata Consultancy Services.

Each vendor brought back ideas to Habib that showed off their own technology, of course. But because they worked closely with technology and business analysts from Nielsen to come up with those ideas, they were tailored to the company.

Dealing With Vendors

For more on **VENDOR MANAGEMENT** read "Why You Need More Than One Software Vendor" at www.cio.com/article/171155.

CIO.com

The best part? It was all free. The vendors are so hot for Nielsen's business, they volunteered their time and people. It doesn't hurt, either, that Habib is on a first-name basis with the CEOs at those suppliers.

"People want to help. They just don't want to be taken advantage of," he says.

Too often, CIOs move quickly to throw a vendor proposal out on price, says Ed Hansen, an attorney who specializes in negotiating technology deals at Morgan Lewis & Bockius in New York.

Habib, however, was shopping not for lower prices but for high concepts. He was probably able to learn a lot more about how those vendors work and what their capabilities are, Hansen speculates, than if he were out looking to scrape a few percentage points off his costs.

THE LESSON >>> Don't get tangled in dollar signs.

"Eliminating someone on price without knowing what's behind the price—that will kill you in three years," Ed Hansen says. "That's when a new challenger comes along and you've got the old, uncreative, cheap vendor in there that you have to rip out at high cost."

Manage for Tomorrow

So take a breath. Don't let this recession talk scare you into making mistakes in how you manage vendors and advise CIOs and negotiators (see "With Vendors, Reprogram Your Reaction to Recession," Page 40). History shows that recessions typically end within one year. That's a short time in the life of a technology deal. A five-year contract for telecommunications services that buys you savings this year but escalates costs in 2009, 2010, 2011 and 2012 isn't smart. Nor is forgetting that you and your vendors both must navigate economic downturns.

As Hansen puts it: "Be very, careful not to do things that have long-term impact that you'll regret simply for a short-term gain." **CIO**

Senior Editor Kim S. Nash can be reached at knash@cio.com. To comment on this article go to www.cio.com/article/190600.



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Solving the Distributed Application Challenge

Accelerating applications to branch offices while gaining control and security

Brian NeSmith PRESIDENT AND CEO, BLUE COAT SYSTEMS, INC. NeSmith leads Blue Coat in providing organizations with acceleration, visibility and control of Web applications. Previously he cofounded and served as CEO of Ipsilon Networks, an IP switching company acquired by Nokia in 1997.

Corporate networks today are increasingly distributed, with more employees in branch offices than in headquarters and more working remotely from home or on the road. At the same time, applications and servers continue to become centralized. This increasingly complex environment challenges CIOs to optimize and secure the performance of business applications accessed via the enterprise

“WAN optimization is strategically important, and it should be should be considered...as a feature of a larger application infrastructure.”

wide-area network (WAN) and the Internet. Brian NeSmith of Blue Coat Systems explains how WAN optimization, integrated with Web security and control, can overcome these issues.

What advice would you give CIOs about the use of WAN optimization?

WAN optimization is strategically important, and it should be considered not as a stand-alone product but as a feature of a larger application infrastructure. Improving application performance requires visibility and understanding of what goes across the WAN and Internet connection points. Mission-critical applications must be accelerated, the “bad stuff” eliminated and everything else managed or mitigated. At the same time, companies need a way of effectively distributing their own video across the enterprise network. We say that WAN optimization should be something that stops the bad and accelerates the good.

Companies are increasingly using video for internal training and live company events. What challenges does this present with corporate networks, and what are potential solutions?

Corporate video represents an increasingly significant portion of overall network bandwidth. Companies are using more video for training and corporate communications. Video delivery is really a part

of a complete, application-centric WAN optimization infrastructure. On-demand video should be prepopulated in branch offices or cached locally. Live video should be sent across the WAN as a single stream and then split at each branch office to accommodate local viewers.

Proper security provides insurance for the enterprise. Blue Coat provides security with acceleration. How does this change the value proposition for the enterprise?

One of the most compelling aspects of our products is that whereas we can provide protection from malicious Web threats and control over applications, we can also accelerate content and applications. We can do this at the Internet gateway and at each branch office. As companies are beginning to move away from backhauling all Internet traffic to and from the branch in favor of having direct access there, they need to provide

the same levels of security and control as in the headquarters. The combination of security and acceleration in our products gives companies both WAN optimization and the security and control needed to connect directly to the Internet.

How do you see the WAN evolving to better suit the distributed enterprise as more and more employees and branch offices work remotely?

The basic packet-and-switch network plumbing is going to continue to expand. Companies will continue to add more capacity and transmission links. At the same time, enterprises will require an application delivery infrastructure to reside on top of the packet layer. This will ensure secure and accelerated applications and allow monitoring of what users are doing. It will discern what is good and what is not. It will also allow for performance measures that can't be solved by just increasing transmission bandwidth. This new layer is going to be one of the biggest changes for CIOs.

FOR MORE INFORMATION:

Check out the white paper “The Case and Criteria for Combining Application Acceleration and Security” at www.cio.com/whitepapers/bluecoat.

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Virtual worlds like Second Life aren't just for games. Companies are experimenting with virtual environments for everything from training exercises to meeting spaces for remote workers. But the technology still has pitfalls.

BY C.G. LYNCH

For emergency responders working along Interstate 95, accidents aren't a game; they're a way of life (and death). So it seemed odd to a group of firefighters, cops and medics when researchers from the University of Maryland suggested it use a virtual world to collaborate on training for rollovers, multicar pileups and life-threatening injuries.

The phrase *virtual world* is often associated with Second Life, the much-hyped 3-D environment hosted by Linden Lab that allows users to talk to friends, sell T-shirts, fly around on carpets and even build amusement parks—in other words, to play. At first, the emergency responders who make up the I-95 Corridor Coalition didn't take seriously the idea of a vir-

tual world as a training tool, says Michael Pack, director of research with the University of Maryland's Center for Advanced Transportation Technology.

"It wasn't until we started to do elaborate demos that the first responders started to realize the true potential," says Pack, who has since begun rolling out a virtual world pilot project that could accommodate training for hundreds of emergency workers.

In fact, as the consumer buzz over Second Life has faded, organizations like the I-95 Corridor Coalition,

Reader ROI

- :: Business applications for virtual environments
- :: Pros and cons of virtual-world technology
- :: Lessons from early adopters

accountancy PricewaterhouseCoopers and healthcare technology provider Greenleaf Medical have quietly explored business uses for virtual worlds. From setting up 3-D environments for geographically dispersed workers to giving therapy to troubled teens, early adopters are testing virtual worlds as a collaborative tool.

Industry analysts and developers of virtual worlds believe that by immersing users in an interactive environment that allows for social interactions, virtual worlds have the potential to succeed where other collaborative technologies, like teleconferencing, have failed. Phone-based meetings begin and end abruptly, at the mercy of the person or service administering it. In a virtual world, conversations between employees can continue within the virtual space—just like they do in company hallways after a meeting ends. “The informality of a virtual world can lead to great conversations,” says Roo Reynolds, a Metaverse evangelist with IBM. Reynolds works on Metaverse, a virtual world for Big Blue employees. “It leads to discussions that otherwise would have been missed with the formality of older technologies.”

However, businesses must overcome many technical and cultural obstacles before they adopt virtual worlds on a major scale. The technology often lacks robust audio capabilities that business users need to communicate, and it can be frustratingly slow without a high-performance desktop. Meanwhile, users have to get over the novelty of working as their virtual selves. And there’s a learning curve for older workers who didn’t grow up with richly rendered video games.

Perhaps even more important than the technical challenges, companies must tackle the issue of workers’ online identities. People’s 3-D representations, known as avatars, must be constructed in such a way that allows users of virtual worlds to have faith they’re talking to the right colleague. Security challenges abound; most companies using virtual worlds today do so on a public or externally hosted platform with limited options to protect corporate data.

“You want people to be so comfortable in the virtual world that they’re not concentrating on how to use them,” Pack says. “They can’t be worried about how to turn left or talk to someone. They need to be worried about how to do their jobs, just like they would in the real world.”

EARLY ADOPTERS GET DOWN TO BUSINESS

Many first adopters have proceeded carefully when implementing virtual worlds, in some cases opting for trials and low-risk options that require modest

“In our first meeting [in a virtual world], people stood on tables and had fun and roamed around. Remarkably, though, by the second meeting, people became engaged and were ready to talk.”

—JONATHAN REICHENTAL,
DIRECTOR OF IT INNOVATION, PRICEWATERHOUSECOOPERS

investments. Jonathan Reichental, director of IT innovation at PricewaterhouseCoopers, started researching virtual worlds for the professional services firm more than a year ago. Since then, his team has tested virtual worlds that are hosted outside the company’s firewall. He’s looking for one he likes. Reichental hopes virtual worlds can be used for recruiting, innovation, business modeling and training.

“We’ll extract more uses over time as it becomes even more enterprise-ready,” he says.

University of Maryland’s Pack got the idea to use a 3-D environment for first responders after a group from the I-95 Corridor Coalition took a tour to Europe to observe the training techniques of emergency workers there. “They had great simulations where if you did the wrong thing [in a virtual world], everything would get worse,” he says.

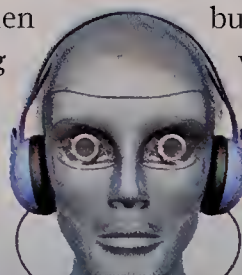
Pack says training in a virtual world presents a desirable alternative to real-life exercises, which can be pricey and inefficient. “You’d go out in a field and flip a car over and have people act as victims,” he says. Trainers couldn’t introduce many variables (such as mounting traffic). In virtual worlds, Pack and his team can program multiple scenarios into the software. For example, if a first responder gets out of his car and fails to put on a reflective jacket, the system might respond with a car hitting that person’s avatar.

“It’s supposed to be as human as possible, so anything goes,” he says. “We’ve put together lots of scenarios, from fender benders to 20-car pileups. We put [the participants] in dangerous situations to see how they will respond.”

While Pack and Reichental remain optimistic about virtual worlds, however, most organizations lack the developers with the proper skills to work on them, says Erica Driver, a principal analyst with Forrester Research. “Most places don’t have 3-D developers on staff to build this stuff,” she says. “Initially they’ll turn to vendors with out-of-the-box [software] to get them started.”

LEARNING FROM THE MISTAKES OF SECOND LIFE

To see the challenges and benefits of adopting virtual worlds, businesses need to look no further than Second Life, which analysts say has affected the technology for both better and worse. Though viewed by some as



CIO2CIO 2 PERSPECTIVES

Today's IT Leaders on Market Trends

BUSINESS PERFORMANCE

CIOs Need to Speak the Language of Business to Sell IT's Strategic Benefits

It's no secret that the most successful companies today are the ones that deliver the right products and services faster, more efficiently, more securely and more cost-effectively than their competitors, and the key to that is a practical implementation of enterprise technology to improve business performance. IT executives and managers therefore must speak the language of business to articulate how technology can solve business problems.

But that's not easy. Despite an acknowledgment that technology helps solve business problems and a widespread, genuine desire to align business and IT goals, alignment is still not occurring at a great many companies. This is borne out in a new survey by IDG Research, in which only 7 percent of companies report being very effective in aligning their business and IT goals, despite the fact that the vast majority of companies surveyed said doing so is a top IT management priority, both now and in the near future.

Forty percent say they've been effective in aligning goals while the bulk of respondents, 42 percent, have only been moderately effective. A major challenge in unifying business and IT interests, according to the survey, is a failure to communicate. Forty-five percent cite difficulty in defining business goals, and 42 percent say poor communication between IT and business is a roadblock.

IT managers already understand the infrastructure requirements necessary to support business initiatives. Now they need to communicate that to the business decision makers in a language they understand. But how?

Innovation and IT

It's clear that business needs are driving IT investment. According to IDG Research, compliance regulations are the most common driver, followed by revenue growth, profit growth and a need to improve one's competitive market position. That said, most companies would prefer not to buy technology for its own sake, as there is little value in the latest technology if it doesn't solve a real business problem.

This coincides with what survey respondents say about innovation. Seventy-nine percent say commitment to innovation is a very important or important criterion in choosing a technology provider. But what characterizes an innovative company? It's not necessarily technology. Seventy percent of companies say

that a firm understanding of their business needs is the most common characteristic associated with an innovative company, followed by high quality of service.

Making the Case

Business and IT challenges tend to be universal, regardless of industry. These include but certainly are not limited to cost reduction, business continuity/disaster recovery, faster time to market and systems integration. These are real challenges that are identifiable and understood by business leaders, and they can only be overcome through the application of technology.

About CIO2CIO

Perspectives: This peer-based thought-leadership program analyzes quantitative research and tests it via qualitative interviews with actual CIOs. The resulting executive insight is then disseminated via CXO's multimedia assets. To learn more about CIO2CIO Perspectives, please contact mavery@cxo.com.



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PERSPECTIVES

Today's IT Leaders on Market Trends

Simply, IT needs to speak the language of business. That means working with a technology provider that understands real business problems and processes, helps frame and articulate the benefits of specific solutions, and possesses the technology and expertise to implement and support them.

And customers are looking to vendors for help. In survey results, technology providers ranked among the top three resources for helping their customers apply a broad range of IT to improve business performance and processes.

Technology providers can improve the performance of their customers' business with an infrastructure that accelerates time to market, reduces costs, protects existing IT investments and ensures service availability. Business leaders and other decision makers aren't interested in ones and zeroes. They want to know how a particular enterprise technology is going to make the business stronger in some way. For example:

Tech Talk: breakthrough application performance/high-performance systems

Translation: we can process more orders, faster, than competitors; scalable systems mean we're prepared for growth and unexpected spikes in business/Web traffic

Tech Talk: server clusters with monitoring, high availability and automated recovery

Translation: business continuity; our business will not go down

Tech Talk: automation, server consolidation, virtualization, managed services

Translation: reduces the cost of acquisition, management and ownership of technology

Tech Talk: integrated software platform, Web services

Translation: provides a 360-degree view of data on customers, suppliers, inventory, etc.

Technology providers can help IT make the business case for these technology investments because they have the products and expertise to help their customers frame and articulate

the business problem and assess ROI, risks and benefits.

Indeed, nearly two-thirds of respondents said best practices and implementation guidelines—the type proffered by technology providers—would be most useful in building a business case for IT investments.

Conclusion

CIOs have had a seat at the boardroom table since only about the mid-1990s, after it became clear that some progressive companies were using IT to gain a strategic ad-

vantage over their competitors. Business-minded technology executives and staff now know better, after the dot-com bust, than to pursue IT initiatives with no positive impact on business value.

Every piece of technology is an opportunity to improve busi-

ness performance and business processes. A server is a means to process huge quantities of customer transactions at lightning speed. Software is a means to scale your infrastructure to quickly support more customers, partners and suppliers. Virtualization is a means to make more efficient use of existing IT assets. And business continuity solutions ensure that your applications and systems never slow down.

These are generally accepted principles, yet the alignment of business and IT interests, goals and initiatives is in its infancy in many companies. That's likely due to the fact that, outside the senior executive ranks, most technologists don't speak the language of business. But technology providers can help IT managers take initiatives to implement strategic solutions to improve business performance.

Go to www.cio.com/whitepapers/sunbusiness

to obtain a free download of the complete white paper "Business Performance." Based on a major survey by IDG Research Services, the report features in-depth discussions with CIOs and IT leaders, and draws on peer insights to help CIOs move toward better management and optimization of their virtualization initiatives.

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Communications Tools Unite

Conferencing and collaboration capabilities bring real-time element to unified communications.

Warren Baxley

SENIOR DIRECTOR OF PRODUCT MANAGEMENT AND DEVELOPMENT

There are many exciting things happening in the unified meeting space, particularly when it comes to tying real-time capabilities—like conferencing and collaboration—into the broader umbrella of unified communications, says Warren Baxley, senior director of product management and development at Chicago-based InterCall. Read on to find out more about these innovations.

1. Why are CIOs expanding their definition of unified communications?

CIOs are expanding their definition beyond e-mail and voice mail because they are looking for communication and productivity gains that can only be realized through technology that includes real-time collaboration. Unified communications has traditionally been about messaging—sending voice mails as a media attachment or accessing e-mail via

er's job is to unify all those capabilities so it feels like one meeting even though multiple back-end technologies are involved. That's what we call a unified meeting.

3. What trends are you seeing in unified meetings?

The most innovative trends have to do with incorporating conferencing and collaboration into this broader definition of unified communications in

vide the consultation to identify implementation and integration points.

5. Should CIOs be looking at hosted, on-premise or hybrid solutions?

CIOs should work with consultants that can help them understand which approach is best for their organization. Most CIOs will want to look at hybrid solutions, because they will be able to purchase all the various unified communications services from the vendors they like best for specific components. And they should be able to buy each in the service delivery model that makes the most sense. For example, they may choose to own and operate e-mail systems for security reasons, but outsource audio conferencing due to management issues. InterCall continues to expand its offerings to meet the needs of the enterprise, whether those needs are for communication capabilities that are hosted, managed, on-premise, or some combination thereof.

"A service provider's job is to unify all those capabilities so it feels like one meeting even though multiple back-end technologies are involved."

one's telephone. These channels are all asynchronous forms of communication. In contrast, telephony and conferencing and collaboration bring in a real-time element. There is much to be gained by including such tools under the umbrella of unification.

2. What collaboration capabilities have become integral to unified communications?

Many companies have a huge number of conference rooms that are gathering dust because tools are now available that make meetings—especially collaborative ones—more productive when participants are at their desks viewing meeting visuals in a personal way and controlling their own experience. Audio conferencing then becomes a core meeting enabler, while Web conferencing affords real-time visuals and control elements for much more effective meetings. A service provid-

a transparent and seamless way. For example, taking a chat session between two people and seamlessly escalating that to include more and richer channels of communications.

4. What can a collaboration service provider offer that typical telephony and IT vendors cannot?

Telephony vendors tend to neglect the complexity of real-time multiparty communication, such as treating audio conferencing as a bolt-on capability to the IM experience. Adding insult to injury, enterprises often underestimate what happens behind the scenes. Audio conferencing in particular is a difficult service to deliver because it is fraught with challenges, including a network of global carriers and very "spikey" traffic.

It's important to work with a provider that has the partnerships and can pro-

FOR MORE INFORMATION:

Check out the white paper **"Unified Communications and Collaboration: What Do Workers Want from UCC and How They Can Get It"** at www.cio.com/whitepapers/intercall



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"These massively multiplayer games aren't appropriate for all types of training. For example, we'll never use this serious game to teach a fireman how to connect his hose to a hydrant."

—MICHAEL PACK, DIRECTOR OF RESEARCH, UNIVERSITY OF MARYLAND CENTER FOR ADVANCED TRANSPORTATION TECHNOLOGY



a fatty piece of Web 2.0 excess, Second Life deserves credit for putting virtual worlds on the map.

"This is the first time we can observe a large user community in a virtual world that the users are able to shape and reformulate," says Jaron Lanier, a computer scientist who was among the pioneers of virtual reality in the early 1980s. "The mere fact that it can work at all on a social level was only a theory before Second Life. Overall it's been a great success."

But Second Life has pitfalls, including problems with managing user identities, limited security and less-than-perfect audio—all factors businesses must consider when setting up their own virtual worlds. "Second Life is still a Wild West," says Jonathan Yarmis, an AMR Research analyst. "Businesses have legal issues and policies they must consider."

IDENTITY MATTERS

In Second Life, people create avatars with genders, races and eye-pleasing anatomical features that often contrast their own. While businesses shouldn't prevent their employees from being creative (it's foolish to think users will let their virtual bodies surrender to gravity), they need to create policies for avatar creation so that people maintain consistent representations and adhere to appropriate dress codes, says Yarmis.

The early adopters haven't delved too deeply into this issue, though University of Maryland's Pack says the soft-

ware he bought from Forterra Systems allows for easy customization to differentiate users from one another. First responders will wear appropriate uniforms so their colleagues can pick them out during a training exercise, but that doesn't mean he wants everyone to look the same. "We can easily go in and change the body shape of the avatars," he says. "If you want to make them fat, or have a rounder face, we can."

Companies should aim to maintain consistency and accountability, without sacrificing creativity, says Aaron Delwiche, cofounder and CEO of Elastic Collision, a company that consults with organizations on how to deploy virtual worlds. "We encourage people to be imaginative and playful because virtual worlds are a freeing of the imagination," he says. "But you do need to have guidelines."

THE NEED FOR GOOD AUDIO

Many Second Lifers with imaginative avatars don't want anyone to know what they really sound like, observes Ian Wilkes, Linden Lab's director of operations. "A big criticism we got from Second Life residents when we released audio was, Well, this kind of pulls back the curtain on who I really am and it isn't what I want."

But business users require it. Experts even argue that users typing what they have to say could disrupt their thought processes. "The typing would have been a showstopper for us," says Dan Gillette, lead designer at Greenleaf

Throw Away Half Your Disk Drives



VIRTUAL TRAINING FOR EMERGENCY WORKERS

Transportation first responders practice how to manage an accident scene in these screen shots from a training exercise of the I-95 Corridor Coalition. Participants enact scenarios through avatars.



Medical, a Palo Alto, Calif., company that recently worked with a residential treatment facility in Camden, N.J., to use virtual worlds to provide therapy to children with psychiatric disorders. Virtual worlds allow patients to communicate in a stimulating environment where they might be more willing to open up about sensitive issues than they would face to face. "We need the patients to go in freely and have these social interactions [with their therapist]," Gillette adds. "For that, you need voice."

Unfortunately, for companies looking to use virtual worlds on a larger scale, audio needs to be perfected in such a way that takes into account spatial considerations. "When someone walks up to you from your left, you want to hear it in your left ear," says AMR's Yarmis. "When this happens, it takes virtual worlds beyond the realm of being a cartoon and it becomes a reasonable substitute from being in the same room."

GETTING USERS ON BOARD

The prospect of an avatar that improves upon one's looks won't be enough to get employees to venture into a virtual environment. For one thing, people have to get used to it. Younger workers will be comfortable more quickly navigating around a virtual world because they grew up with game consoles such as those from Nintendo and Sony, says Forrester's Driver. "The 30-and-younger crowd will pick this up in a few minutes," says University of Maryland's

Pack. "That doesn't mean the older folks won't get it too, but it will take a little longer."

Even once users learn their way around, PWC's Reichen- tal says you need to allow for the novelty factor to wear off. But he adds that this can be a pretty painless process with some users. "In our first meeting [in a virtual world], as you'd expect, people stood on tables and had fun and roamed around," he says. "Remarkably, though, by the second meeting, people became engaged and were ready to talk."

The first responders who participated in Pack's demos became so enthusiastic that "we had to bring some of them back down to reality," he says. "They wanted it to do everything for them. [But] these massively multiplayer games aren't appropriate for all types of training. For example, we'll never use this serious game to teach a fireman how to connect his hose to a hydrant or teach a wrecker how to properly rig a vehicle for towing."

ARE VIRTUAL WORLDS RIGHT FOR YOU?

Driver believes using virtual worlds for meetings and training is the tip of the iceberg. She imagines that in five years, each knowledge worker will have about four monitors on her desk, perhaps with one dedicated to the Internet and e-mail and the rest to internal and external virtual worlds where people collaborate with colleagues and customers.

But to get started, you have to understand what virtual

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The VENDOR in the MACHINE

These are some vendors of virtual worlds software that can get you started building and using 3-D environments

Though virtual worlds are a nascent technology, some vendors offer out-of-the-box software that will help companies get started with 3-D environments and avatars for their employees with little development work of their own, says Erica Driver, a Forrester Research analyst.

Here's a list of some virtual-world vendors and their specialties, according to a recent Forrester report, "Getting Real Work Done in Virtual Worlds."

Forterra Systems With its Online Interactive Virtual Environment (Olive) platform, Forterra helps companies set up client-side applications and servers capable of handling the demands of a 3-D environment. The I-95 Corridor Coalition uses Forterra software to train first responders how to work an accident scene, but it can also be used for simpler activities, such as a meeting between employees. Most customers who use Forterra use speech, rather than text, to communicate.

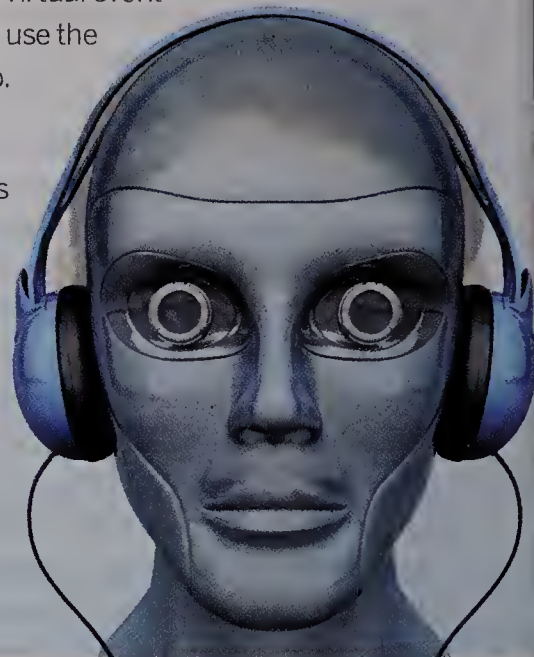
Qwaq If you want to set up a virtual meeting space right away, Qwaq might be a good place to start. This vendor takes virtual-world meetings beyond cartoonish avatars sitting at a table. Qwaq software lets users drag documents to the wall or to the air within the virtual space so they can collaborate. Qwaq will host the server for you or will set it up for you to host. It supports both voice and text chatting.

Unisfair Unisfair allows you to meet with clients in a virtual space just as you would at a conference. By facilitating 3-D environments where you can display a product or talk about a specific service, Unisfair makes it easy to hold a virtual event or trade show. Clients need only a Web browser and Flash to use the technology, and they can communicate using text and audio.

Vivox Knowing that communication capabilities will make or break the success of virtual worlds, Vivox focuses on providing voice technology for 3-D environments. For companies that are first adopting the technology, however, this might be a "down the road" consideration as they work to get visuals of the virtual world in place first.

Icarus Studio Icarus provides businesses with a set of development tools they can use to build virtual worlds and customize them to their specific needs.

—C.G.L.



worlds offer today. Yarmis has spent a lot of time in Second Life, and suggests that people interested in virtual worlds for business do the same. "To grasp what's really going on, you need to make a commitment to spend a number of hours there. That's the only way you can see how rich an experience it really is," he says.

As end-user companies wait, big tech vendors have begun building and testing new virtual worlds on themselves. At IBM, developers are building the Metaverse, a place for Big Blue's employees to meet informally. Sun Microsystems, meanwhile, is developing MPK20, a virtual world extension to its 19-building facility in Menlo Park, Calif. According to Nicole Yankelovich, principal investigator of the collaborative environments group, at any given time more than half of Sun's

employees work remotely (which Sun encourages because it reduces the need for office space and has environmental benefits). Virtual worlds are a compelling alternative to the boring old audio conference. "We need a way to bring everyone together and get some informal brainstorming going," she says.

Accessing MPK20 from the comfort of her home might help Yankelovich and her colleagues avoid the traffic on that wide stretch of highway near their Burlington, Mass., office, known as I-95—a place the I-95 Corridor Coalition's first responders hope they won't have to visit, at least in real life, anytime soon. **CIO**

Training in a Virtual World

To see a video of the I-95 CORRIDOR COALITION'S VIRTUAL TRAINING EXERCISES, go to the online version of this story at www.cio.com/article/180301.

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HEARD ON THE STREET?

CEOs and CFOs talk a good game to investment analysts about how mission-critical IT is to the business. But does Wall Street care about IT? The answer is: **It depends.**

BY THOMAS WAILGUM

Before a single stock traded on Wall Street on Jan. 22, the world had telegraphed its view of the slumping U.S. economy. And it wasn't pretty.

Markets worldwide from Tokyo to Frankfurt tumbled hard that day, spooked by U.S. recession fears. To calm jittery investors at home and abroad, the Federal Reserve slashed interest rates with an unheard of "emergency U.S. rate cut." Coming too late to help the now-closed Asian markets, the surprise move helped rally U.S. and European investors. A roller coaster day of trading ended with

Reader ROI

- :: How to make financial analysts happy
- :: The importance of offering a track record of IT successes
- :: Balancing Wall Street's demands with those of the business

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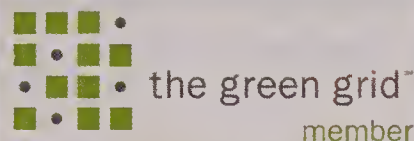
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most European exchanges finishing up and the Dow ending down by just 128 points—after a plunge of as much as 460 points when U.S. markets opened after the Martin Luther King holiday.

IT had little to do with the wild gyrations of world markets that day, in contrast to its role on Black Monday, Oct. 19, 1987. That day, the Dow plummeted 508 points, or 22.6 percent, and the market crash was worsened by the use of automated computer trading systems, according to the Securities and Exchange Commission.

Of course, IT chiefs can hardly be expected to come up with quick fixes for the credit crunch, subprime mortgage crisis, housing slowdown and jobless rate climb. But the recent turn of events, coupled with sour economic forecasts for 2008, raises intriguing questions about IT's role at publicly traded companies. How much can a CIO and his IT operations influence Wall Street? What should CIOs do to keep their organizations in the good graces of shareholders?

system rollout depressed its stock price by 20 percent, cost Nike more than \$100 million in lost sales, triggered a flurry of class-action lawsuits and led its Chairman, President and CEO, Phil Knight, to famously say, "This is what you get for \$400 million, huh?"

IT run very well can make a company's internal operations more efficient and have a direct impact on bottom-line results. But getting recognition for good work with The Street isn't easy.

In this case, IT is like the mechanic who gets little credit for a well-cared-for and dependable car, say CIOs and financial analysts. A car should run smoothly, shouldn't cost too much to maintain and should take good care of its passengers. Surprises ought to be rare.

"If everything is going swimmingly with a company and its stock, then IT doesn't matter [to Wall Street]," says Patricia Edwards, a portfolio manager and managing director at Wentworth, Hauser and Violich who focuses on retail. But if

push and pull of satisfying Wall Street (see "How to Keep Wall Street Analysts Happy," Page 64). But the pressure to satisfy shareholders and financial analysts with lean IT operations, decreasing annual technology investments and lots of short-term successes does not always make for great IT.

"There is a balance," says Frank Modruson, CIO of Accenture. "Your goal is to operate so cleanly that IT becomes invisible and fades into the background. At the same time, you want to drive that IT ability to get better and better because it can take friction out of the business and reduce the cost of doing individual transactions."

Accenture's recent survey of CIOs found that IT innovation suffers when executives' technology priorities and investments align more with Wall Street's needs than with those of a company's internal and external customers.

"Executive and technology leadership—under pressure from investment analysts and other Wall Street observ-

When we report externally, we don't say that the IT platform or our IT execution systems performed well. We say, 'Equity did well.' You talk about results from the business perspective.

— FORMER CREDIT SUISSE CIO TOM SANZONE

CEOs and CFOs talk a pretty good game to investment analysts about how mission-critical IT systems are to the business these days. But the question remains: Just how much does IT actually matter to Wall Street?

The answer is: It depends.

IT matters a lot when systems and networks go horribly and publicly wrong, perhaps saddling a company with unexpected costs, lost customers, reduced revenue or a failed acquisition. Such events can cause a company's stock to sink like a stone with investors.

Remember Nike's supply chain disaster in 2000? A software "glitch" in its i2

systems are ignored and IT investment is continually chopped, then, to borrow the car analogy, "companies won't notice it at 7,000 or 8,000 miles, but they will notice it at 15,000 miles," Edwards says. "Sometimes it doesn't matter until it matters."

Like when the engine falls off as you're heading down the interstate at 75 mph.

Good for Wall Street, Not So Good for IT

As the CIO role has evolved in the last decade, with its elevated status and "seat at the table," executives in charge of core IT operations in publicly traded companies have received a crash course in the

ers—are undertaking superficial improvements in their IT systems rather than making fundamental changes to meet the growing demands of users," stated the survey, which polled CIOs at nearly 300 global Fortune 1000 companies.

The problem is that IT shops have focused too much attention on cutting costs and maintaining legacy systems and not enough on developing online customer service initiatives and innovative Web 2.0 and social networking projects, the survey found.

But even if IT watches costs and innovates at the same time, does the word get to financial analysts and shareholders?

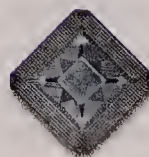
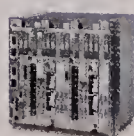
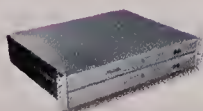
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IT SERVICES AND SOFTWARE ENTERPRISE NETWORKING AND COMPUTING SEMICONDUCTORS IMAGING AND DISPLAYS

The reality is that IT doesn't get mentioned when earnings are good and the business is performing well, says Tom Sanzone, who was CIO of Credit Suisse. Sanzone sat on its executive board before resigning last month to take a new job. Yet in many of Credit Suisse's technology-centric business units, he says, IT systems are critical and can provide a competitive differentiator (see "A Balancing Act," Page 68).

"For example, in a business where you're doing electronic trading or algorithmic trading, the majority of business flows through our technology infrastructure," he says. "If that business is performing well, clearly IT has a big part to play. But when we report externally, we don't say that the IT platform or our IT execution systems performed well. We say, 'Equity did well.' You talk about results from the business perspective."

Of course, the flip side is that if a significant systems failure placed a hit on quarterly earnings, the company "would highlight that as a reason why the results were affected," he says. "In that case, [IT] gets specifically called out."

The Dangers in Mergers and Acquisitions

Wall Street loves a successful acquisition. And with a hot mergers and acquisitions market, the pressure on IT to ensure smooth systems integration and careful consolidation has never been greater.

"One of the key factors of very big integrations is the ability of IT to consolidate and streamline the acquisition onto a single platform and gain significant cost savings," says Sanzone, who has worked in IT supporting M&A transactions. "As the head of IT, I know what would be expected of me. And that's certainly a type of pressure I have felt."

But how challenging are such deals for the acquiring companies and their IT shops, which must mesh together dissimilar systems to provide the efficiencies and savings that Wall Street expects? Consider this: An August 2007 Boston Consulting Group study of more than 4,000 completed mergers and acquisitions

How to Keep Wall Street **HAPPY**

It's not often that Wall Street financial analysts hear from a CIO. But that doesn't mean they aren't interested in what's going on inside IT.

"When we value a company, the value is based a lot on earnings potential," says Bonnie Chan, a securities analyst at Dreman Value Management who covers financial services. "And an IT implementation can increase earnings potential." Or, conversely, it can take away from a company's value if financial analysts don't see a clear link between an IT project and a financial return, she says.

One way to impress analysts is to provide clear time lines and expected returns to the financial community on massive IT projects. So a CIO could say, "In the next three years, we will invest X amount of money in IT and save \$100 million," Chan says. "We would love time lines like that."

Chan claims no expertise in IT but she's well aware of the difficulties involved in implementations and systems integration. "There's so much that can go wrong integrating multiple systems that can affect, say, sales," she says. "We know that things can blow up."

Red flags pop up when, for example, management offers analysts vague time lines for starting or finishing a systems integration in a merger or acquisition, Chan says. "If we have a sense that a time line is delayed, that's certainly a red flag," she says. "And we'll have to ask more questions."

IT initiatives that have close proximity to the end customer will also get more scrutiny than other types of company programs "because these are the instances where long-term damage, such as customer dissatisfaction, can be done if things don't go according to plan," says Chan.

Lastly, Chan says if a CIO does have to speak on a quarterly conference call, leave the IT-speak back in the shop. "It can be sometimes hard for [CIOs] to be articulate," she says, "and for the audience to understand what they are saying."

-T.W.

between 1992 and 2006 found that 58 percent of deals actually destroyed value for acquirers, with a net loss of 1.2 percent for all transactions.

"What happens in looking at these deals is that [the companies] don't realize how hard and expensive it is to consolidate onto one platform," says Barry Jaruzelski, VP and lead marketing officer at Booz Allen Hamilton, a management consulting firm. The challenge is intensified when companies start looking at consolidating and changing all of the preexisting business-to-business connections and migrating terabytes of customer data.

"Companies are entangled with their customers, and customers don't want you to move to [something different]," Jaruzelski says. "The transition costs of moving the data, translating it and all the workarounds that have to happen can become huge when they get into the granular

implementation."

One company that has faced challenges integrating its acquisitions is Level 3 Communications, a global communications company that provides IP, voice, voice-over-IP (VoIP) and broadband services.

Excerpts from Level 3's 2007 third-quarter earnings report delivered on Oct. 23, 2007, detail the ongoing integration challenges. Level 3 has acquired six network companies since 2005, each with its own provisioning processes and systems, stated President and COO Kevin O'Hara in the report. Level 3's Project Unity integration plan was to have the new processes and systems deployed in increments in 2007 and into 2008.

"While the fundamental approach was sound, we made some implementation decisions that in retrospect made achieving our provisioning throughput targets more difficult," O'Hara said in



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—BONNIE CHAN, SECURITIES ANALYST, DREMAN VALUE MANAGEMENT

the report. "In particular, we took certain processes which had been centralized and split them up among our customer-facing groups, which made identifying and fixing throughput issues more difficult. As a result, we fell short this quarter in increasing our provisioning capabilities to the level we expected."

O'Hara reported that in the third quarter, Level 3 "incurred approximately \$20 million of integration expenses for a total of \$80 million year to date," and the company still expects to incur approximately \$100 million in integration expenses for the full year.

In a November 2007 report from market researcher Current Analysis, analyst David Hold attributed Level 3's integration challenges mainly involving the transition to "a single set of back-office systems for its acquired carriers, as the reason for difficulties in converting high order levels to revenues and a subsequent reduction in the growth of its core communications revenues during the second and third quarters of 2007."

The company's revenues have increased from \$1.7 billion in 2005 to \$4.3 billion in 2007 due to the acquisitions, but it is still not profitable, losing \$1.11 billion in 2007. Since its Oct. 23 earnings announcement, its stock price slid from \$3.28 to \$2.38 a share by the end of February 2008. In its fourth-quarter results, Level 3 noted progress on integration efforts, retiring legacy systems and applications that had contributed to operational complexity.

Execute Well, Impress Financial Analysts

To Accenture's Modruson, his responsibility to Wall Street is clear: "I try to make operations as efficient as possible while

freeing up money to invest and continue to make IT better," he says.

To that end, he stresses the importance of offering a track record of IT successes—with hard-dollar returns on IT projects and metrics that bolster IT's contribution to both operational savings and increased productivity.

That track record is key to financial analysts like Bonnie Chan, a securities analyst who covers financial services at Dreman Value Management, an \$18 billion money management company. Chan looks for a strategy from IT that either saves money or enhances productivity.

"I don't need to know the nitty-gritty details about what exactly this IT platform entails," Chan says. "Execution is key: Who is doing it and what's their track record?"

Accenture tries to impress the business operators who follow it by demonstrating how its IT operations execute. As an example, Modruson cites a scheduling system for Accenture employees that IT rolled out a few years ago.

Scheduling is critical for firms like Accenture, which must track billable hours spent by multiple consultants on multiple client projects. Modruson's team did some research and discovered the existing system was slow-performing, had a poor user interface and was the company's third most expensive application to run in terms of total cost of ownership. "Not exactly a win-win app," he says.

Analysis on the application showed why: It was poorly architected and required a ton of extra hardware costs and staff attention to run, Modruson says. Accenture eventually replaced it with a custom-built application that costs half as much to operate and reduced by 70

percent the time it takes to staff employees for assignments. "We hit all three: better, faster, cheaper," he says.

Efficiencies gained from projects such as the scheduling system as well as projects to standardize Accenture's global ERP systems on SAP and a revamp of its telecom infrastructure have allowed Modruson to reduce what IT spends per person by 60 percent since 2001. That has happened even as Accenture has increased its IT investment each year and more than doubled the company's headcount—from 75,000 employees in 2001 to 175,000 today. Over the same period, Modruson points out, Accenture's revenue rose from \$11.4 billion in 2001 to \$19.7 billion for the past fiscal year.

"We didn't just cut the IT costs, we replaced [IT systems] with better technology that was more efficient to operate," he says. "If you look at overall G&A spend, it's gone down substantially since 2001. A chunk of that is from IT because we've made IT more efficient."

Modruson's CEO probably hasn't called out his IT projects by name during quarterly earnings meetings but chances are those IT achievements reside on a line item somewhere on the quarterly report's balance sheet.

What's the Value of Good Technology?

Wall Street doesn't always overlook IT's contributions. But those contributions have to shine before analysts take notice.

Nordstrom is a company with a great brand name and an upscale customer base. But the department store chain wasn't always a big believer in IT and retailing systems. Nordstrom had "systems so antiquated that they were taking



TODAY'S ENTERPRISE WORKFORCES: REMOTE BUT NOT ISOLATED

IP TELEPHONY KEEPS EMPLOYEES CONNECTED AND COLLABORATING

Today's workers have moved beyond the four walls of the corporate office. In fact, fixed remote workers—at-home, executive suite and solo office employees—make up a growing 12 percent of the workforce. And as enterprises look to remote workers to lower costs and cast a wider hiring net, some challenges remain—especially when it comes to communication.

"Remote employees typically don't want to function in completely isolated environments, making the ability to effectively communicate and collaborate as important, if not more important, for remote workers as for in-office staff," says Joseph Staples, senior vice president of worldwide marketing at Indianapolis-based Interactive Intelligence, Inc.

A recent survey by IDG Research Services, in conjunction with CIO Custom Solution Group, sheds light on remote workforce trends and the ways in which many CIOs are using Internet Protocol (IP) communications to ensure remote workers remain collaborative.

Growth Expected for Remote Workforce

For starters, the survey reveals staggering growth projections: nearly half of the responding companies expect their fixed remote workforces to

increase. And, among those, the vast majority says that hiring remote employees will outpace or be on par with overall hiring.

This finding aptly reflects the nature of today's labor pool in which organizations are finding it increasingly difficult to hire and retain the best talent given geographic limitations and ever-present budget constraints.

"Companies in a single geography that are hiring to fit employees within their four walls are at a definite disadvantage," says Staples.

The trend toward remote workforce strategies doesn't come without problems. The greatest concern among survey respondents is the ability for remote workers to effectively communicate and collaborate with other employees. Isolation can stunt productivity, a none-too-appealing scenario for both the enterprise and the worker. "Frustration quickly builds for remote employees if they are not effective in their jobs," Staples explains.

Other issues cited by respondents include being able to properly supervise remote workers and provide an appropriate level of technical support.

Helping Remote Employees Communicate

Many enterprises though are meeting these remote-workforce challenges. The majority of respondents indicate that their companies have already implemented, or plan to implement, IP communication solutions for fixed remote employees. IP communications is key to unifying business communications—from phone calls to e-mails and Web chats—while connecting remote, mobile and in-office employees for one seamless enterprise.

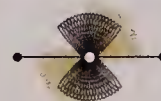
Fifty-four percent of respondents cite enhanced communication applications and improved employee productivity as two of the top benefits IP communications will provide for their fixed remote employees. Planned IP communication investments for the remote workforce include Web conferencing, softphones, instant messaging, a unified inbox and video conferencing. A similar lineup of technology is being deployed for in-office workers, but not with the same urgency.

"When you correlate the data between remote and in-office workers, it's interesting that CIOs recognize, and even value, the use of IP telephony for remote staff and are therefore investing in more advanced communications in this area," Staples says.

Respondents concur, with 84 percent indicating that such technology has or will help their remote employees communicate more effectively, proving that CIOs can indeed facilitate winning remote workforce strategies with IP telephony.

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• 48% say their fixed remote workforce is expected to grow—outpacing overall hiring

• 59% say effective communication and collaboration is their top concern

• 84% say IP telephony has or will help with communication

Research conducted by
IDG
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In conjunction with
CIO
Custom Solutions Group

physical inventory twice a quarter, writing it down with a pencil or pen," says retail analyst Edwards, who follows the retailer. "They were so far behind the eight ball."

But after 2000, Nordstrom embarked on a technology overhaul, taking advantage of new point-of-sale, inventory, price-optimization and buying systems, says Edwards. The company also linked its Internet and in-store inventory management systems, allowing for more innovative, customer-friendly and flexible delivery options. "They are a shining example of how technology can help," Edwards says.

Nordstrom executives declined to be interviewed. But in the company's 2006 annual report, they acknowledge technology's impact. "Our investments in new technology and systems over the last five years have laid the foundation for more accurate decision making. Improved operating disciplines and cost controls have led to a higher return on investment," it states. "Our new systems and merchandising disciplines have helped us begin to tap into that business by enhancing our ability to keep inventories fresh and turn them more rapidly."

Wall Street has reacted warmly to the technology-induced changes. In 2000, the retailer's stock price hovered around \$15; by January 2007, it nearly topped \$60. Nordstrom was trading at \$38.02 in late February. But Edwards notes a clear long-term trend: "You can absolutely see that the technology has helped them over the last seven years," she says.

The technology sword can cut both ways. In the 2006 annual report, Nordstrom also detailed challenges it had in creating a "seamless experience for our customers between our stores, catalogs and website, linking the Full-Line stores and Direct merchandise organization."

While Nordstrom executives believed their strategies would improve operating performance, "we also found that the technology changes will be more challenging than we initially anticipated," they wrote in the annual report. "Executing this strategy may cost more and take longer than expected, which could impact our future

A BALANCING Act

Game-changing IT projects require time and investment. Wall Street likes quick wins and cost savings. How one public-company CIO balances the two.

Tom Sanzone knows all about the torrid pace of life on Wall Street and its impact on long-term IT strategies and spending. "It's a difficult thing to manage because companies, from a practical standpoint, have to be focused on quarterly and yearly performance. But many things in IT are multiyear," says Sanzone, who was the CIO of Credit Suisse.

Sanzone made it less difficult for his business peers because he always aligned his multiyear technology strategy with Credit Suisse's multiyear business strategy. "In that way, the business and IT are both thinking long term," he says.

But just as good money managers maintain a broad portfolio of investments, Sanzone's IT portfolio included a mix of quick-hit, tactical initiatives and more intense, strategic ones. To make this plan work, however, he says there needs to be "an open and active dialogue with the business to make sure you're both on same page." This also allows IT to secure funding for big projects because there are fewer surprises.

"[The process] is never easy," Sanzone says, "but it's much easier if you can be hand in hand with the business developing a two- to three-year strategy that IT aligns to and highlights which projects are strategic and which are tactical."

—T.W.

operating performance."

Despite the challenges, Nordstrom plans to spend \$170 million annually on IT operations and systems development to sustain its competitive position and grow the business.

At Credit Suisse, which has revenue of about \$8.2 billion, Sanzone and his team leveraged virtualization technologies to save millions and become fast, flexible partners to their business counterparts. The IT team has reduced the time it takes to allocate server space for application-hungry lines of business from weeks or months to a day or two. This allows "quicker time to market for the products that they need, competitive advantage and driving revenue growth," he says.

But do the financial analysts who follow Credit Suisse care about this?

"I don't think the analysts are interested in a virtualization conversation," Sanzone concedes. "What they would be interested in is if we were doing things from a technology perspective that were going to significantly reduce expenses or improve efficiencies in the coming months that were meaningful to earnings or to the bottom line."

Securities analyst Chan echoes Sanzone's point. "We're very bottom-line focused," she says. "Do I really care how CIOs do it? No. But can they do it?"

Sanzone—like most CIOs—never presented at Credit Suisse's quarterly earnings calls. And Chan says it's not often that she'll hear a CIO on an analyst call. "The only time when we see them is if the company is embarking on a major initiative," she says. That, Chan adds, is when "the investor community will demand to know the ins and outs of the program." **CIO**

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Everybody Wants to Rule the World

When CIOs think about the global expansion of their enterprises, the G-word quickly comes to mind: governance. Their fear is that without carefully constructed governance, decision making, oversight and even simple visibility into the IT organization will quickly become muddled. When CIO Executive Council members last year created the Globalization Playbook, governance was a significant section. (Managing global teams was another aspect of the playbook; go to www.cio.com/article/174750 for an excerpt.)

Central Versus Local Versus Distributed

The fundamental consideration in global governance is the control model. Should IT authority reside centrally, locally or in combination? There's no perfect model; one that works at one stage in a company's lifecycle may be a poor fit in another. However, most of the CIOs interviewed for the Council's playbook use a centralized model. That means the corporate CIO and the senior leadership team are responsible for decisions such as IT strategy, project prioritization, system selection and application development methodologies.

When significant local control is granted, the model becomes a hybrid in which enterprise standards and global systems are controlled centrally, but local IT management is responsible for selecting and managing some systems.

A distributed model places nearly all authority at the

local level, perhaps with some financial support systems or e-mail provided by headquarters. Purely local, decentralized control was the least-used governance model among the Council sources, although it gains traction as companies grow into diverse regions.

How to Choose

One simple way to think about your governance model is "centralize for efficiency, decentralize for effectiveness," says Michael Pilkington, former CIO of Brussels-based Euroclear. When you consider a governance model, it's important to understand the operating mode of the business you're supporting. For example, does the company

care about alignment across regions? At Motorola, alignment is critical, says Cathie Kozik, corporate vice president of supply chain IT. Given that, Motorola has gravitated toward centralized IT governance.

Focusing on IT processes can also point to the optimal governance model. Which processes are truly core to your business? Could they be controlled centrally? Could they be executed according to local needs? For Claudio Abreu, CIO of corporate and business services for Bayer

North America, strategy and core processes must be the same globally. However, the strategy should always be executed in a way that makes sense for the location—a trademark of the hybrid model.

Continued on page 72



Claudio Abreu

[CHECKLIST] Danger Signals

How do you know when you don't have enough governance?

- » You see costs rise due to duplication of effort.
- » The time and money required to maintain any particular local system exceed what it would cost to maintain a global one.
- » You discover "surprise" systems running in remote locations.
- » Local business units are not following governance processes or guidelines when initiating projects.
- » Your local business partners grow dissatisfied and stay dissatisfied.
- » You have consistent difficulty hiring top talent in remote locations.
- » High employee turnover or low morale exits in the remote locations.
- » Staff complain that they can't get things done or that they feel caught up in bureaucracy and constantly changing priorities.

—R.P.



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[PEER COUNSEL]

How to Structure Reporting Relationships

Q: We're moving from a hybrid to a more centralized global governance model. How would you adjust IT staff reporting structures?

A: At ON Semiconductor, local IT managers have a hard reporting line to corporate IT managers at our world headquarters in Phoenix, and a dotted line to their local business/functional manager. This structure is the reverse of what was in place in 2000, when it became evident that the local hard-line reporting structure was enabling the "reprioritization" of corporate-mandated projects in local units, leading to missed deadlines. Once we realized this, we knew it was necessary to change the reporting structure to reflect more centralized authority.

—David Wagner, CIO,
ON Semiconductor

One simple way to think about your governance model is **"centralize for efficiency, decentralize for effectiveness."**

—Michael Pilkington, former CIO, Euroclear

Rule the World

Continued from Page 70

The enterprise's decision-making culture must also be figured into your thinking. Where does thought leadership come from? Local autonomy may be a good fit for a culture that welcomes input from outside headquarters.

Universal Best Practices

While there are best practices and pitfalls associated with each model, there are must-dos that apply to all.

Involve senior leadership. Senior leadership from all your regions should be part of governance-model decision making, advises Bayer's Abreu. That will encourage better acceptance of the final model.

Be flexible. Organizations often doom their model by going to extremes, says Abreu. Push too much customization and costs skyrocket. Or, force a standard or practice without taking the local market or culture into consideration and you get backlash.

Maintain visibility. Within FedEx's IT organization, Beth Galetti, CIO and VP of IT for Europe, the Middle East and Africa, holds quarterly best-practice forums in each region for each IT function. Galetti also relies on boards made up of business function heads from each region to gain visibility into major projects. The boards examine all IT projects that require more than 40 hours of development work.

Leverage tools for communication and collaboration. Simple applications such as time reporting and project tracking can provide insights into local IT resources. Communication and collaboration tools are also helpful when staff are spread across many time zones and continents. ON Semiconductor adopted NetMeeting and SharePoint to enable its IT staff of 325 to keep initiatives moving globally.

Technology can facilitate collaboration, but not without defining collaboration processes first, warns Hess CIO Pete Walton. "Rolling out collaborative technologies in a company culture that doesn't know how to collaborate is a recipe for CIO failure," he says. To achieve a better understanding of collaboration and how it best can be implemented within Hess's centralized environment, Walton created a collaboration technologies group that is involved in all meetings held on global business unit collaboration and can serve as a resource for how to make collaboration work.

Don't be afraid to change. Few companies choose a model that works perfectly and works all the time. (See "Danger Signals," Page 70.) Several companies that grew up with local IT control, such as FedEx and Procter & Gamble, have moved toward either a more hybrid or a more centralized model, having decided that local control was providing diminishing returns. **CIO**

Richard Pastore is Managing Director of Content Development for the CIO Executive Council. Comment on this article at www.cio.com/article/191700.

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5

Things I've Learned

THE VOICE OF EXPERIENCE * AS TOLD TO JARINA D'AURIA

Wikinomics author and consultant **Don Tapscott** believes that transparency is power and that the benefits of collaboration outweigh its drawbacks

Business is under the microscope today.

Due to the Web, companies are scrutinized like never before. In a world of instant communications, whistle-blowers, inquisitive media and Googling, citizens and communities routinely put firms under the microscope. Customers can evaluate the worth of products and services at levels never before possible. To collaborate effectively, companies and their business partners have to share intimate knowledge with one another. Corporations are becoming naked. And if you're going to be naked, you'd better be buff!

Transparency is a new form of power.

Rather than being something to be feared, transparency is becoming central to business success. Open corporations perform better,

so smart firms are choosing to be open. I suppose you could say they "undress for success."

The benefits of mass collaboration are boundless.

I'm hard-pressed to think of a service or product that couldn't benefit. The music industry is probably the most irritating to me; it's been clear what they should do for years. But leaders of old paradigms have the greatest difficulty embracing the new—and the industry that brought you Elvis and the Beatles is hated by its customers. I'm surprised by the C-level executives who insist, despite evidence to the contrary, that collaboration's drawbacks outweigh the benefits.

Practice what you preach.

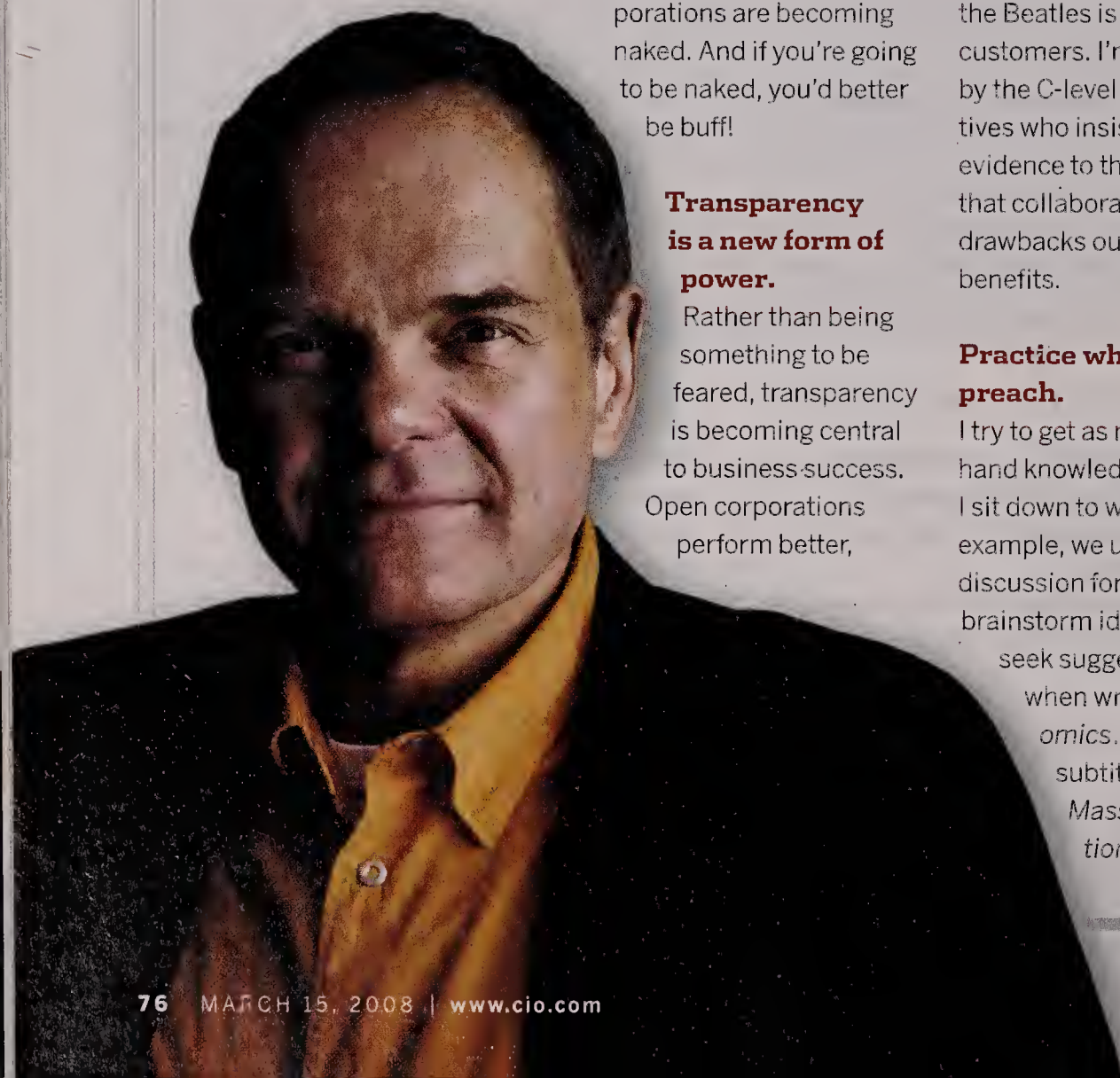
I try to get as much first-hand knowledge before I sit down to write. For example, we used online discussion forums to brainstorm ideas and seek suggestions when writing *Wikinomics*. The book's subtitle—*How Mass Collaboration Changes*

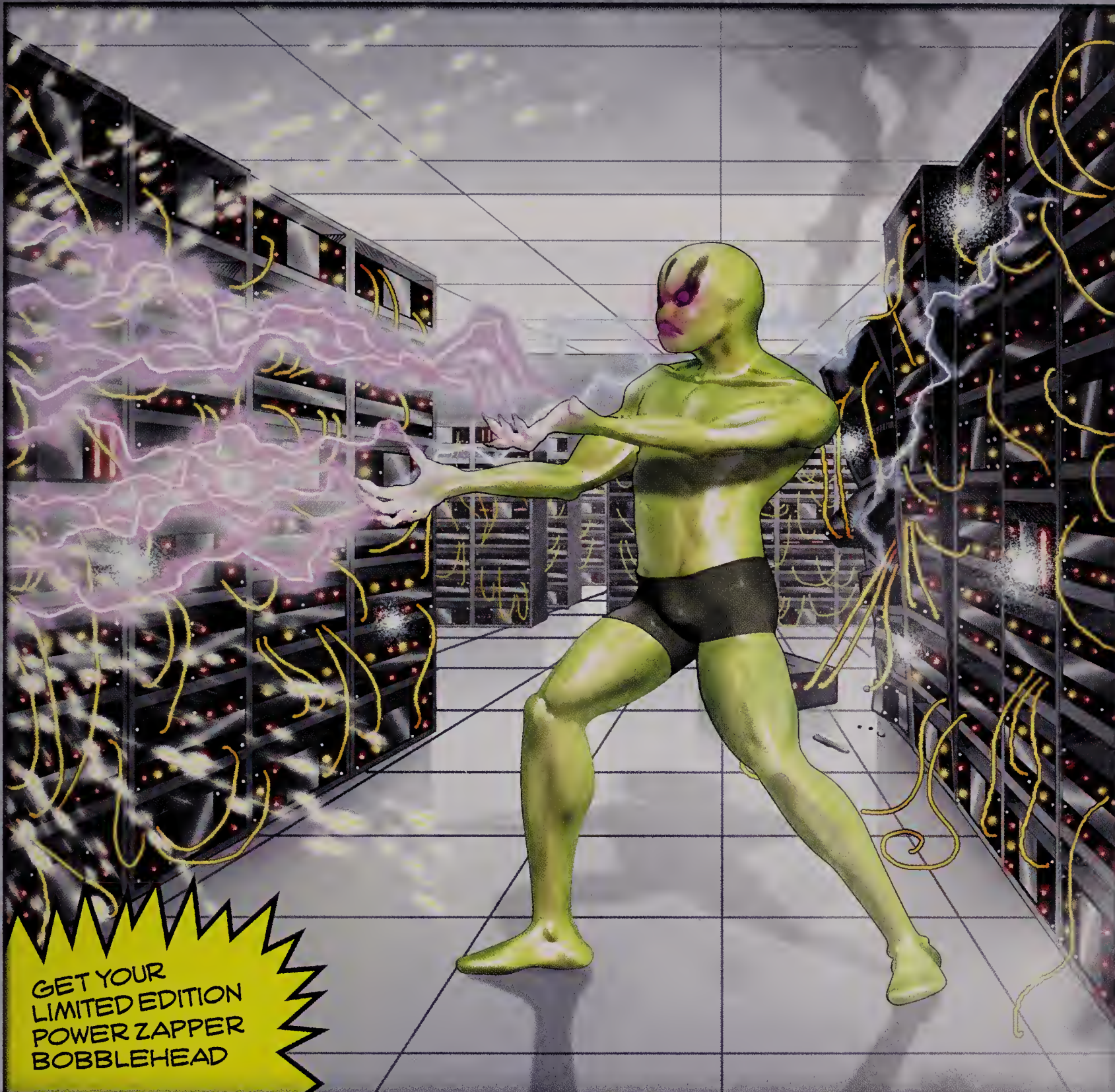
Everything—was arrived at by soliciting suggestions from the public. The final chapter is a wiki. I'm currently writing a sequel to my 1998 book, *Growing Up Digital* called *Grown Up Digital*. Again, I'm using online discussion groups on Facebook and other networks to brainstorm ideas. We run the company by wiki—there hasn't been an actual management meeting here in months.

Thinking forward pays off.

I first began to seriously think of networking and the profound impact it would have on society during my work on the "office of the future" at Bell Northern Research in the 1970s. My research was within the corporate context but it didn't take long for me to see that networking would extend beyond corporate boundaries, and some form of "information superhighway" would precipitate major changes. But back then, everyone said professionals and managers will never learn to use a keyboard.

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